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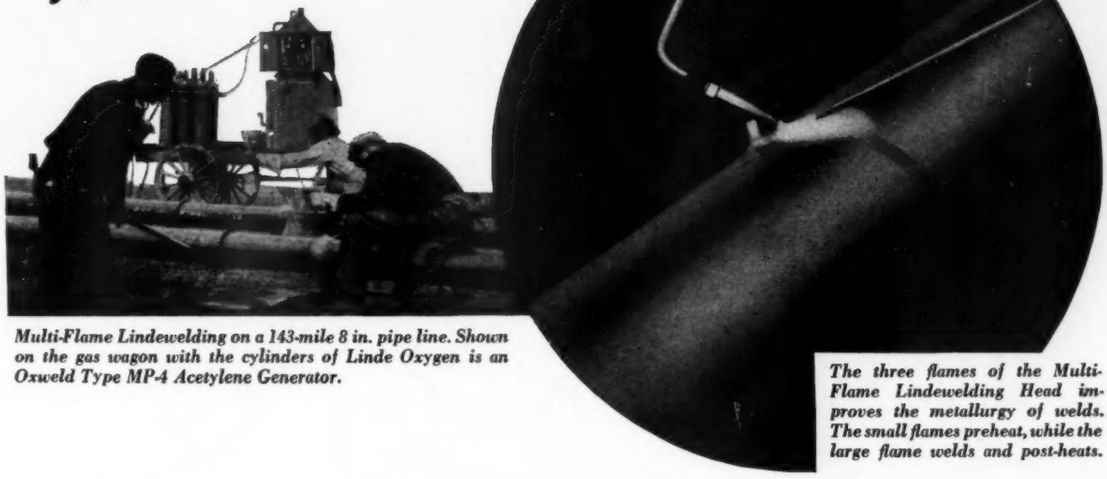

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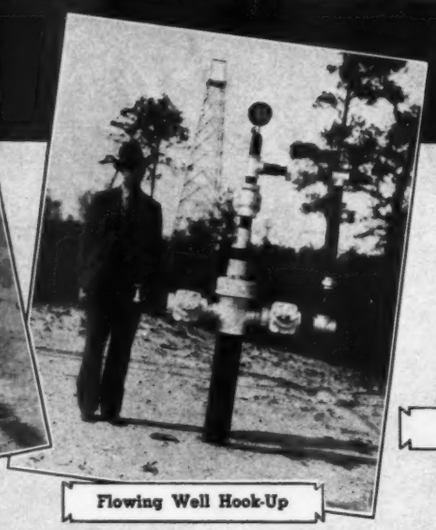
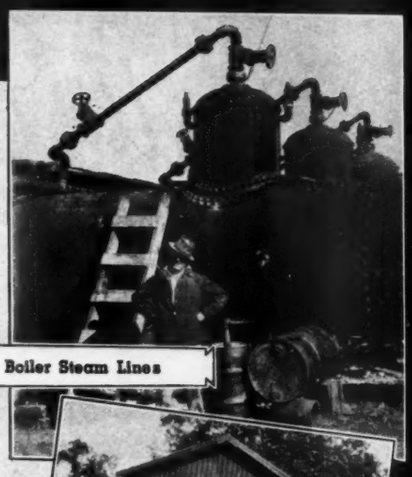
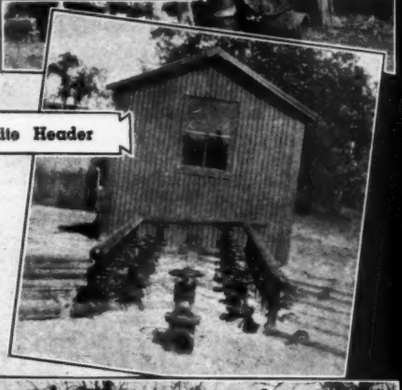


Flowing Well Hook-Up



Boiler Steam Lines



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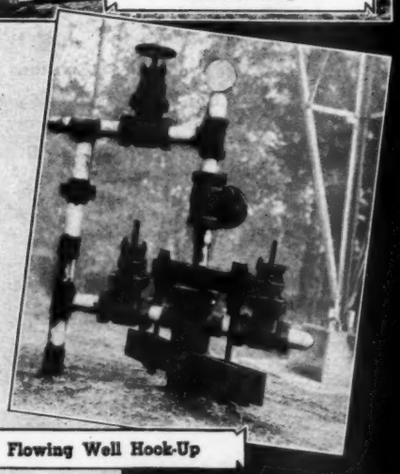

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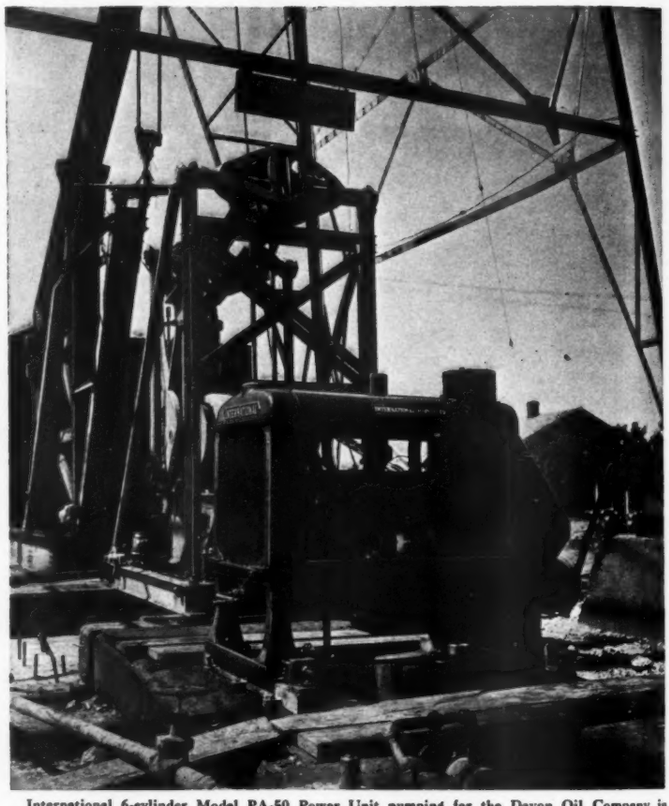

International 6-cylinder Model PA-50 Power Unit pumping for the Davon Oil Company in the Oklahoma City field. International Power Units range in size from 12 to more than 100 h.p., and there are 1½ to 5 h.p. engines for light-duty service.

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Look on Page 176 of your 1936 **COMPOSITE CATALOG**

See for yourself how the side openings direct the cement in an upward whirling spiral! Note also the buoyant bakelite ball which double-seals against rubber at the slightest reversal of pressure. And don't overlook the internal construction of concrete and bakelite which drill *out*, drill *up* and circulate *out of the hole*. No dangerous metal ever is used!

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New High Mark Is Set in Crude Output

AN all-time record was established in the past week, when the average daily production of crude oil in the United States totaled 3,068,364 barrels. This exceeded the previous high mark, set up in the week ending May 16, 1936, by 62,924 barrels, and it topped last week's daily average by 108,680 barrels. All the major producing states except Louisiana (and it has become a habit to point an accusing finger at Louisiana) contributed to the rise. The particularly conspicuous gains were those of 69,150 barrels daily in Oklahoma and 30,675 barrels in Kansas. All the principal producing states exceeded both the estimated demands fixed by the Bureau of Mines and the allowable production set by their own state officials. California overshot the Bureau of Mines recommendation by 42,000 barrels daily and that of the Central Committee of California Oil Producers by 48,000. In the case of Oklahoma and Kansas it is not believed the high rate of production will be continued throughout the rest of the month. It is the practice of some Oklahoma operators to produce their entire allowables in the early part of the month. In Kansas, one of the best-behaved states in the matter of observing recommended allowables, the output in the week ending August 8 was far below the Bureau of Mines recommendation, so that what looks like a big jump in production is without real significance.

Weakness in both the wholesale and retail gasoline markets was apparent in scattered areas. This was attributed to nervousness on the part of a relatively few sellers who have larger stocks than they had last year and who want to get rid of them within the next 30 days. No substantial quantities of motor fuel that justifiably could be put in the distress classification are pointed out, and many refiners in the Mid-Continent and Midwestern areas are known to have reduced their inventories to actual working requirements.

Production 3,068,364
Increase 108,680

Reports indicate that in some refining areas the fall demand for kerosene and tractor fuels has begun, though both of these products have experienced a disappointing season thus far on account of drouth conditions which have interfered with both plowing and harvesting operations. There also is noted a slight improvement in the movement of light distillates in preparation for the fall and winter demand. There was general expectation that storage of furnace oil would start early this year.

In the producing division interest will focus largely this week on the announcement of the National Refining Company that it will withdraw within 90 days as a purchaser of oil in the famous old Lima field of Ohio, where 7,000 wells now are yielding 2,000 barrels daily. This will mean loss of the major outlet for this oil. The deepest East Texas well is a failure at 7,799 feet.

Daily Average Production for Week

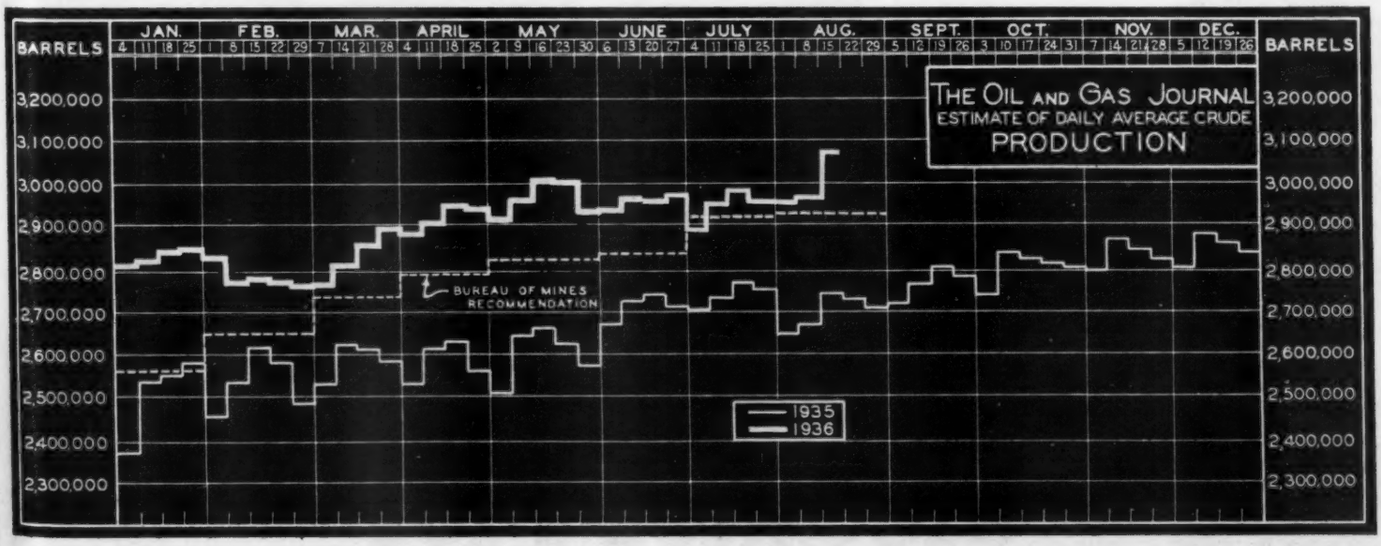
	Aug. 15 1936	Bur. Mines Aug. est.	State allowable	Aug. 8, 1936
Oklahoma City	164,475	.....	.....	125,050
Seminole-St. Louis	100,475	.....	.....	92,050
Remainder of State	336,500	.....	.....	315,200
Total Oklahoma	601,450	575,500	575,500	532,300
East Texas	438,248	.....	.....	438,147
West Texas	179,846	.....	.....	179,448
North Central Texas	87,000	.....	.....	87,245
Texas Panhandle	60,687	.....	.....	55,793
East Central Texas	60,246	.....	.....	59,539
Gulf Coast—Texas	257,196	.....	.....	256,396
Southwest Texas	86,789	.....	.....	84,543
Total State of Texas	1,170,012	1,154,700	1,157,941	1,161,111
North Louisiana	79,780	.....	.....	85,090
Gulf Coast—Louisiana	152,550	.....	.....	151,889
Total Louisiana	232,330	188,500	230,250	236,979
Santa Fe Springs	45,250	.....	.....	46,000
Long Beach	67,000	.....	.....	66,250
Kettleman Hills	86,750	.....	.....	81,250
Remainder of State	398,000	.....	.....	392,000
Total California	592,000	550,000	*544,000	585,500
Kansas	170,325	166,500	166,500	139,650
Arkansas	29,200	31,200	.....	29,200
Eastern Fields	110,700	110,800	.....	111,400
Michigan	31,577	32,400	.....	31,844
Southeastern New Mexico	70,500	69,000	76,855	70,500
Rocky Mountain Area	60,270	58,300	.....	61,200
Total United States	3,068,364	2,936,900	.....	2,959,694

*Recommendation of Central Committee of California Oil Producers.

Crude Oil Stocks in United States

(BUREAU OF MINES ESTIMATE)

Week ending August 1, 1936	306,751,000
Week ending July 25, 1936	306,968,000
Week ending August 3, 1935	330,879,000



SPARKS FROM THE NEWS

South's New King

Saturday, August 22, is a Texas election day with special oil significance. The run-off for nomination for railroad commissioner involves rate of production in East Texas. Cotton is no longer king.

Remember 1836!

What manner of treason is this? Nathan Adams, Dallas banker, tells Texas and Louisiana bankers at New Orleans that "Louisiana has biggest future oil reserve of any state in the Union." Has Mr. Adams forgotton the Alamo?

Balance All!

Gasoline stocks are down about 12,000,000 barrels from the high of last spring. It is estimated we have 40 days' supply on hand against 38 days' a year ago. Nothing out of balance in that picture.

Infertile Soil

With higher wages, shorter hours and higher index of employment than comparable industries, the petroleum refining industry may not be easy to unionize. Contentment makes poor breeding ground.

Difference

Mid-Continent refiners should remember that gasoline demand due to the shut down of a major refinery does not reflect gain in actual consumption.

Late

The buyer who waited for the summer low in the natural gasoline market is now paying fall prices. The period of maximum refinery demand is not yet under way.

Exonerated by Pressure

East Texas bottom-hole pressures increased nearly seven pounds during past month. If the strict prorationist needs vindication, he need look no further.

The Magic Ear

The air is so full of Madison rumors it is a wonder radios will work. The static you hear is difference of opinion concerning selection of legal talent.

Drouth in Either Case

Drilling operations in parts of Oklahoma and Texas are seriously handicapped by water shortage. Many other areas find oil shortage to be the drawback.

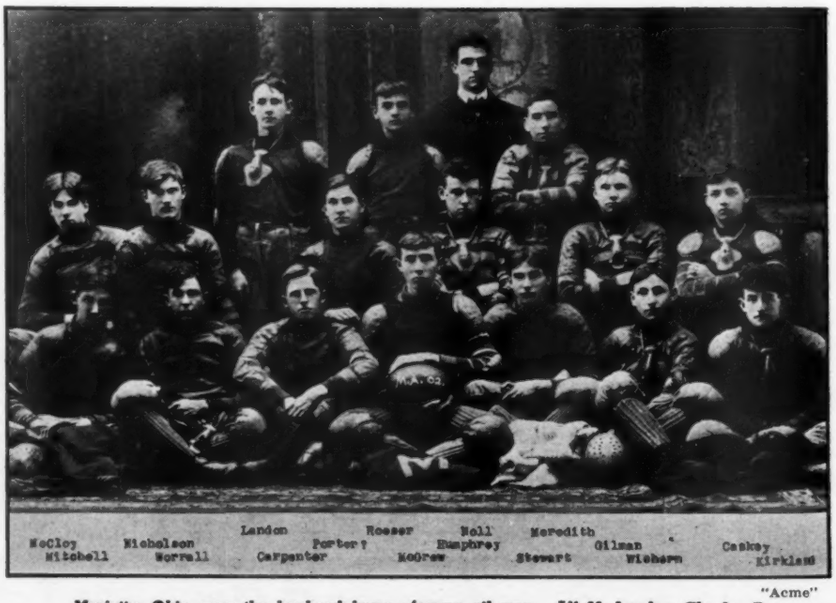
Next?

The possibility of finding the Trinity pay at Talco is exciting wide interest. If this occurs, the industry may really get its feet wet.

Discrimination

Whatever the motive back of the Robinson-Patman anti-discrimination act, it becomes increasingly apparent the consumer will hold the sack.

BEFORE THEY TACKLED THE OIL GAME



"Acme"

Marietta, Ohio, was the boyhood home of many oil men. Ali M. Landon, Charles F. Roeser and F. Ray McGrew were members of the 1902 Marietta Academy football team

Recent construction at the Wood River, Ill., refinery of Shell Petroleum Corporation

Oil Labor Union, Announcing Agreements, Starts Drive for Members

By HUGH D. MALLON

WASHINGTON, D. C., Aug. 15. Plans have been completed here by the Committee for Industrial Organization pointing to the unionization of the oil industry and a membership drive has been inaugurated supported by a fund said to total $500,000.

The membership campaign will be conducted through the Association of Oil Field, Gas Well and Refinery Workers. The association has chosen to cast its lot with the vertical or industrial form of organization sponsored by Committee for Industrial Organization (CIO) of which John Lewis, president of the United Mine Workers of America, is head. Mr. Lewis and his supporters were recently expelled from the American Federation of Labor which favors the horizontal or craft form of union organization. The association of oil company employes formerly was affiliated with the A. F. of L. It has been in existence for several years but made little headway among employes of the industry until the advent of the NRA. Its greatest strength at this time is in the refining branch of the industry.

Harvey Fremming, president of the association and its active head, with headquarters here, summarized to the writer the accomplishments of the union to date and outlined some of its plans for the future. At this time the union has written agreements with 64 major and independent companies. The most important of these, he explains, is that originally entered into during the NRA, with the Consolidated Oil Corp. (Sinclair) and which includes its subsidiary companies. Mr. Fremming points to this agreement as meeting the requirements of employes and he is also complimentary of the cooperation given by the Sinclair management in carrying out the terms of the agreement. It is understood that the renewal of this agreement is under consideration at this time.

In support of the CIO type of industrial organization. Mr. Fremming claims that most of the labor troubles of the oil industry have come from plants organized on a craft union basis. In this connection, he points to the present difficulties at the Wood River, Ill., refinery of the Shell Petroleum Corp. This refinery, which has a crude oil capacity in excess of 30,000 bbls. daily, has not been operating over the past month. He claims that the refinery was shut down due to a disagreement with engineers who constitute one of the craft unions. While only a part of the employes were involved directly in the dispute over 3,000 employes, he says, have been thrown out of work.

Present plans of the oil industry union call for a concentrated effort to be made in the Chicago area towards organizing refineries located nearby. Several plants in that area have working agreements with the union. It is the aim of the union to maintain code hours and wages, or better, in all plants. Mr. Fremming in remarking on this phase of the matter said that the union was meeting with remarkable success in its work.

The union's head points out that court approval has been given to several labor agreements between companies in receivership and the union. Two of these were mentioned, one being the agreement with the Wirt Franklin Petroleum Corp. and the other that with the Deep Rock Oil Co. Agreements presented to the management of both these companies, were referred to the respective jurisdictional courts, and given approval. These court approvals, it is said are among the rare instances of court acceptance of an agreement between a labor union and a company operating under receivership limitations.

Another feature of the agreements so far engineered by the union is that they provide for company check-off on the payrolls of the company. During the month of May, the latest month for which the union had figures available, $29,600 was turned into the coffers of the union by the companies operating under the agreement. This total does not include dues collected from membership not covered by the agreements, Mr. Fremming explained.

Phillip Murray, chief steel industry organizer, will shortly take over direction of the organization drive in the oil industry, according to Mr. Fremming. Mr. Murray will be backed by plentiful funds from the treasury of the CIO, as well as donations from the United Mine Workers.

Efforts to organize the smaller refining companies located in western Pennsylvania have not met with success, nor has the union been able to get much of a foothold in most of the smaller plants in the Mid-Continent area. This is attributed by some to the fact that the small plants are directly managed by executives of the company, and that the majority of such execu-

tives are anxious to keep their employes satisfied, but at the same time reluctant to make agreements with the union. The result is that in this type of plant the employer-employe relationship is closely watched by both sides and in most cases differences are patched up satisfactorily without the need of the union.

In many of the major companies, Mr. Fremming believes that the remoteness of the executives from the scene and the consequent necessity of allowing superintendents and supervisors to interpret company policies often times leads to troubles, which if known by the top executives would be avoided. He explains that the function of the union in either of these two classes of cases is to see in the first instance that the management does not impose inequitable terms on the employes, and that by organizing they will be able to resist any such moves. In the second instance the close attention which union officials give to the problems of workers prevent local officials from carrying out employment programs which are unfair to employes by going directly to the management of companies with their problems and straightening them out there. Mr. Fremming says that invariably he has received courteous treatment and fair treatment from employers.

COMPANIES LISTED

Although only 40 companies are mentioned as having signed agreements with the union the total of 64 is made up by individual agreements with subsidiaries, as well as by agreement consummated since June 1, 1936. The companies listed are:

Sinclair-Consolidated, under a national agreement embracing all subsidiary companies; Empire Oil & Refining Co., East Chicago plant, Okmulgee and Ponca City plants, separate agreements for each; Indian Territory Illuminating Oil Co., Oklahoma City, Maud and Seminole; Wirt Franklin Petroleum Corp., Ardmore and Oklahoma City; Franklin-Cromwell Oil Co., Oklahoma City; Deep Rock Oil Corp., Cushing, Okla., agreement approved by Federal Judge Vaught, as were the Wirt Franklin agreements; Champlin Refining Co., Enid, Okla.; Johnson Oil Co., Cleveland, Okla.; Eason Oil Co., Enid; Shell Petroleum Corp., East Chicago, Ind., Arkansas City, Kans., Houston, Tex., as well as the pipe line division from Houston north, and the refinery at Hobbs, N. Mex.; Shell Oil Co., in entire state of California; Kenda, Ketleman Hills, Calif.; Tucker Oil Co., Burkburnett, Tex.; Texas Pacific Coal & Oil Co., Fort Worth, Tex.; six rig building companies in California; Wadhams Oil Co., East Chicago; Bell Oil & Gas Co., Burkburnett, Tex.; Bohner Oil Co., Burkburnett, Tex.; Louisiana Oil & Refining Co., Shreveport, La.; Ashland Refining Co., and Tri-State Refining Co., both at Ashland, Ky.; Jameson Oil Co. and Jameson Petroleum Co., both of Santa Fe Springs, Calif.

Memorandum agreements, treated by the union in the same category as written agreements with the union are held between the following companies:

Texas Co. at Lockport and Lawrenceville, Ill.; Pryse, Ky.; Tulsa; Port Neches, Tex.; Casper Wyo.; White Eagle Petroleum Co., Casper, Wyo.; and Warner-Quinlan Oil Co. at Linden, N. J.

The report to the executive committee of the union containing this information states that "agreements pending consummation are too numerous to record in this report." Also included in this report is the showing that wage rates for roustabouts, per hour, are 130 per cent of the May, 1929, level used as 100 by the union. The same table shows that average hours per week are 67.5 per cent of the same year's 100 average. There has been an increase of 2 per cent in the weekly hours since November, 1935, it is stated, but a commensurate increase of 1.5 per cent in hourly wages since then, the report shows. Cost of living, shown in the same table is only 82 per cent of the June, 1929, base of 100, although there has been a gradual increase in the last several months amounting to 7 per cent in the past three years.

The table for refinery operations is a bit more complex, the index for this table being July, 1933, as base of 100. It shows by months, instead of by longer periods, what the result of the industry's better financial position is, although it brings the picture only up to January, 1936, which month is estimated. The net result of the table is the showing that the refining branch of the oil industry has increased the average hourly wage rate from 100 in July, 1933, to 133 in January this year. Average weekly earnings of refinery employes have risen 12 per cent during the same period despite a decrease of 11.3 per cent in the average hours per week, while the cost of living has increased only 9 per cent.

The agreement entered into between the union and the Consolidated Oil Corp. covers refining, marketing, producing and pipe line operations of that company and its subsidiaries, to continue until September 1, 1936, and thereafter subject to termination on 30 days written notice by either party. It is further provided there shall be no termination of work by strike or otherwise during the tenure of this agreement. All grievances and disputes as to wages and working conditions shall be settled in the manner prescribed by the agreement, namely:

Each individual employe shall first seek direct adjustment of any grievance or dispute with his foreman; failing to secure an adjustment he may submit his grievance to a committee selected from among and by employes of the company who are also members of the union. Such committee, after investigation, will meet with the official of the company under whom the complaint originated.

Failing to reach a satisfactory agreement with the local official it is provided the president of the union may confer with the chief executive of the Consolidated Oil Corp. to try to reach a satisfactory understanding. If this is unsuccessful it is provided it be referred to the chairman of the executive committee of the Consolidated Oil Corp. and the chief executive of the American Federation of Labor, William Green, with whom the union is now on the outs. In fact, the International Association of Oil Field Workers has been suspended by the American Federation due to its activities in behalf of the C.I.O. If these two parties are unable to agree upon terms of settlement it is provided there shall be an arbitration procedure the decision of which shall be binding upon both parties.

TERMS OF AGREEMENT

It is further provided in this agreement that employes shall perform any duties to which they are assigned but there shall be no cut in wages for any particular employe unless such employe merits such reduction due to lack of efficiency or the discontinuance of his position. Work of a temporary character in a higher paid bracket demands that the higher wages be paid to the temporary worker in that position. The usual provision for seniority of workers in considering advances for individual workers shall be followed under the agreement, but there is also provision made for the advancement of employes for "unusually meritorious service or exceptional ability." An accident on any of the plant operations calls for a payment of time and a half for overtime, under the terms of the agreement, as well as for straight overtime work, not so caused.

(Continued on Page 42)

Indicted Officials Secure Delay in Appearance

Nine residents of Chicago and four in Tulsa who were among those indicted by the federal grand jury at Madison, Wis., obtained continuances the past week when they appeared before United States commissioners to make appearance bonds for the trial of their cases at Madison. The Chicago continuances are returnable September 18 and those at Tulsa, September 22. Those involved are officials and employes of the Standard Oil Co. (Indiana), Pure Oil Co., Deep Rock Oil Co., Empire Oil & Refining Co., Chicago Journal of Commerce and the Western Petroleum Refiners Association.

The action of these defendants in securing continuances was interpreted to mean that the legality of the grand jury action might be challenged at these later hearings. Reports that the sufficiency of the indictments returned against 23 oil companies and 58 individuals for alleged violation of the Sherman antitrust acts have continued over the past week and it is believed legal action will be taken by certain of the defendants previous to the opening of the trial. Several possible challenges as to the legality of the grand jury have been suggested. It is not believed that the actual trail of the case will get under way until after the first of the year. Court for the Madison district convenes the first week in December.

Most of the defendants in the case have bonds for their appearance at Madison, Wis. Others have supplied temporary bonds as in the case of the 13 defendants in Chicago and Tulsa and two have not been served with the indictments due to the fact that they are out of the country on vacation trips.

Reports indicate that the trial of the case will bring together some of the outstanding legal talent of the country both for the defendants and the government. In most cases oil company attorneys are thoroughly familiar with the developments on which the government's case rests as they were advising the operating departments of their companies during the period of the alleged violation of the antitrust acts. It is probable that legal talent outside the oil industry will also be retained by a group of the defendants.

The defendant refiners and marketers operating in the states of the Southwest and Middle West are charged with operating a buying pool in which purchases were made from a group of small refiners in East Texas and the Mid-Continent for the purpose of controlling prices. It is alleged that this resulted in a situation which was unfair to oil jobbers and brought higher prices to consumers.

The federal grand jury at Madison resumed its investigation Wednesday following a recess on July 29. While no official statement has been issued, it is reported that the grand jury will complete its work about September 15. It started its investigation on May 6 and has been in session approximately 50 per cent of the time since that date.

In Washington information obtained from officials connected with the department of justice indicates that no consideration has been or will be given to the claim that the buying program alleged in the indictments was a continuance of a plan inaugurated under the NRA at the suggestion and with the approval of the NRA administration. Under the NRA plan major refiners purchased gasoline from small refiners who did not have regular outlets for their output.

Attorney General Cummings said that several situations led to selection of the western district of Wisconsin for the grand jury probe of the oil industry which has resulted in more than 80 indictments. He explained that the court there had the clearest docket of any in the country and this will assure a speedy trial for those indicted by the grand jury. He also said that Madison is centrally located with adequate facilities to handle the grand jury investigation and the trial of cases.

He revealed that the Chicago district had been considered but was dropped at request of oil jobbers who claimed that the investigation could not be conducted fairly at that point. Complaint of oil jobbers in the Middle West were responsible for the investigation by the department of justice.

Say East Texas Must Not Pass 375,000 Bbls. Oil and Water

By L. G. E. BIGNELL

Serious water troubles, accompanied by rapid drop in formation pressures, are predicted for the East Texas oil field by some engineers unless the present daily rate of production of oil is reduced from between 425,000 and 450,000 bbls. to 375,000 bbls. or less of both oil and water. It is necessary to include the water removed from this reservoir along with the oil in arriving at daily allowable because all fluid produced is being replaced by salt water entering from the west.

According to estimates made based upon the assumption that the East Texas field will continue to operate at the present rate of production, between 425,000 and 450,000 bbls. of oil per day, with the estimated salt water production from more than 1,600 wells averaging about 24,000 bbls. per day, it is predicted that the status of the field as of July 1, 1938, and January 1, 1941, may be summarized as follows:

	July 1, 1938	Jan. 1, 1941
Percentage of original area completely flooded	20	27
Percentage of original area making water...	*33	*37
Percentage of original area free of water and with reservoir pressure above 1,000 lbs./sq.in.	32	6

*Does not include area completely flooded.

At the beginning of August there were 21,087 oil wells in the 128,000 acres included within the boundaries of the East Texas field. This gives an average density of one well to 6.07 acres. Of this number of wells 1,600 are reported as making salt water and the total amount is estimated as being about 24,400 bbls. daily.

This field has produced in excess of 902,000,000 bbls. of oil or about 22.6 per cent of the total estimated 4,000,000,000 bbls. of recoverable oil, under proper operating conditions. The formation pressure in all but a relatively small portion of the field is high enough to prevent gas from coming out of solution in the oil.

It is estimated that in replacing the voids left by the production of the oil approximately 1,110,000,000 bbls. of water has entered the formation. This movement has been so gradual up to this time that serious water trouble has not been experienced but it seems evident that it is important immediate steps be taken to control the water movement and prevent excessive water production or loss of recoverable oil will occur later.

This statement recommending the decrease in daily production of fluid from 425,000 to 450,000 bbls. to 375,000 bbls. of both oil and water is based upon a study of data collected in the East Texas field and supported by actual past experiences gained in many other major oil fields where water drive supplied the main energy for producing the oil.

One company having extensive operations in East Texas and elsewhere has gone to much expense to measure the extraction efficiency of the East Texas controlled water drive. In East Texas wells were cored through the present water level to points below the original water level, so that the cores recovered, when analyzed, gave a measurement of the oil left behind by the water in its upward movement. Wells were drilled in other fields in various stages of depletion, for the sole purpose of obtaining cores, the analysis of which would lead to an accurate estimate of the oil left unrecovered. In one particularly large field cores examined from wells drilled between old producers were found to contain three times as much oil left unrecovered as was found in that portion of the East Texas reservoir already washed by water movement. From these studies the conclusion has been reached that uncontrolled water movement, and the liberation of solution gas in the formation both lead to the permanent trapping of oil, and that conrolled water drive, such as has been practiced up to now in the uniformly spaced portion of the East Texas field, is at least three times as efficient as methods formerly used.

This evidence of water cutting off recoverable oil can be multiplied many times by studies of other oil fields. In the Bradford field, Pennsylvania, a study of controlled and uncontrolled water drive areas proved conclusively that much oil had been made unsuited for production where the water had been unrestricted in its movement through the sand. Where the water movement had been controlled the oil later recovered amounted to considerably more than that secured by the original wells.

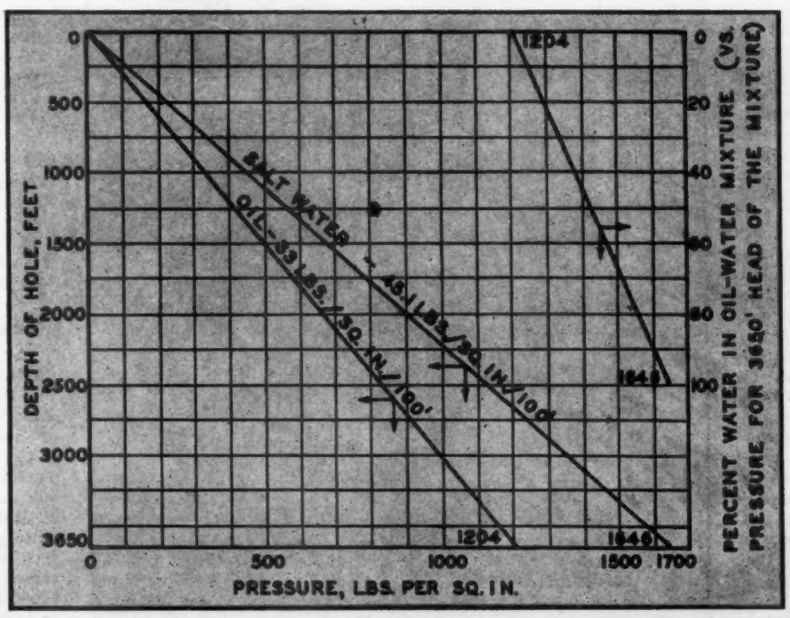
Knowing these things, the engineers in the East Texas area now urge the restriction of rate of production from this field so the movement of the water through the sand will be slower, by-passing of oil by the water will be retarded, formation pressures will be maintained and more oil ultimately recovered.

It is stated that up to this time the water entering the formation has displaced oil from the sands not heretofore suspected of containing oil. This is due to the fact that most of the wells in this field have not penetrated the full section of Woodbine sand and the section of this formation below the bottom of the holes has not been opened for study. As oil was withdrawn from the upper portion of the formation water has moved into the lower part of the sand both laterally and vertically. It has moved always to points of low pressure and the direction of this water movement has not always been from west to east. It is known that some leases have had water move into wells from other than the west side of the lease because leases to the north, east or south have withdrawn oil in excess of daily allowables thereby creating areas of low pressure around those wells producing excess oil and water has been moved upward into these low pressure areas and also on account of the proration rules now in effect, densely drilled areas have created low-pressure zones and caused water channeling. Later this water has found escape laterally into other leases as the pressures there have been gradually lowered as the oil was produced.

When this water reaches oil wells and is produced along with the oil it will no longer have any effect upon maintaining formation pressure. Its energy will have been spent in finding exit into the oil wells and if the rate of oil production remains the same over the next few years, and the water production is allowed to increase without restraint, a serious decline in reservoir pressure will result.

When the reservoir pressure declines below 800 pounds it is known that gas will escape from the oil and will tend to accumulate in voids in the sand and cause a Jamin effect which will retard the movement of either oil or water through these gas-filled pores. This is one manner in which oil may be blocked off from entering the wells and therefore remain unrecovered in the formation.

In addition to creating the Jamin effect any further appreciable decline in pressure will result in release of gas from solution throughout a larger portion of the field, bringing about high gas-oil ratios, an increased rate of pressure decline, and greater and more irregular water encroachment, all resulting in a vicious cycle inevitably bringing about waste of oil.



Graph showing pressure equivalent of columns of East Texas crude oil and salt water

As a corrective measure it is recommended that the Railroad Commission of Texas reduce the daily oil withdrawal from the East Texas field to about 375,000 bbls. of fluid per day. Water is included in this figure because all water removed from the formation is replaced by additional water from the reservoir to the west of the field and may be therefore considered as producing the same physical effects as removal of crude oil.

All wells making water should be ordered plugged back as soon as any appreciable volume of water appears. Where this plugging back operation fails to appreciably reduce the amount of water accompanying the oil the well should be completely plugged and abandoned.

Another important step to be taken immediately would be to

penalize water wells on the basis of volumetric displacement, allowing each well to produce only a limited amount of fluid, whether it is oil or water.

What is anticipated if the present rate of production is permitted to continue for any length of time is shown on the accompanying map. This map attempts to portray the predicted conditions of the field, comparing the present known facts with conditions as they are anticipated by July 1, 1938, and January 1, 1941, respectively, if the field continues to produce more than 425,000 bbls. of fluid daily.

PLUG WATER WELLS

The area from which water is being produced has been drawn to show that the wells within this zone will make water unless plugged back. The wells now producing water are indicated and have been divided into two classes: those making more and those making less than 70 per cent of that fluid.

Based upon the data at hand, it is predicted that by the middle of 1938 20 per cent, or about 25,600 acres, will be completely flooded and no longer capable of producing oil in commercial quantities. This area is along the western side of the field. By the same time it is also believed an additional 33 per cent, or 33,792 acres, will be making water unless the wells within the area are plugged back.

Carrying this study on to the beginning of the year 1941, it is predicted that 27 per cent of the field will be completely flooded and an additional 37 per cent will be producing salt water.

Assuming the wells producing water will make on the average 50 per cent as much water as oil, the total rate of withdrawal of both oil and water will be somewhere between 500,000 and 540,000 bbls. daily by July 1, 1938, and between 520,000 and 565,000 bbls. daily by January 1, 1941.

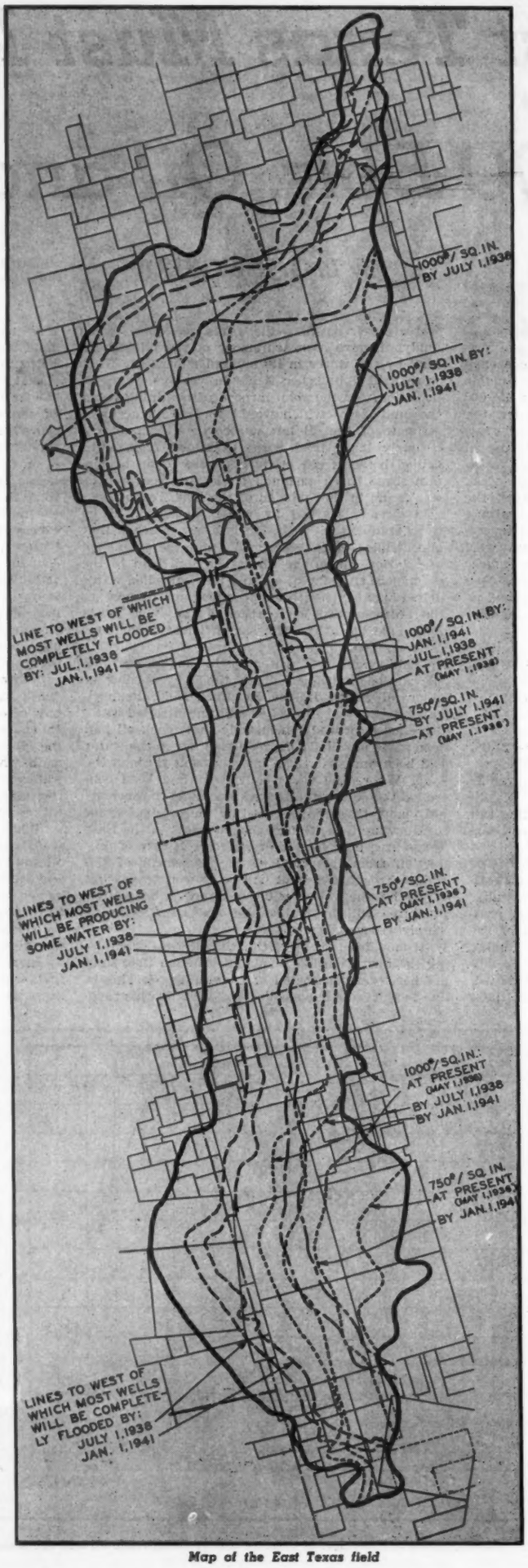
At these rates of production of fluid from the field it has been estimated the average reservoir pressure will have dropped to approximately 1,075 pounds per square inch by July 1, 1938, and to 1,000 pounds by January 1, 1941. The contour lines of the 1,000 and 750-pound pressures as of 1938 and 1941 are indicated on the map.

PRESSURE DECLINE

The rapid progress of the 1,000 pounds per square inch pressure contour line toward the west side of the field is to be noted. In 1938, there will remain 32 per cent of the original field unaffected by water, wherein pressures will be above 1,000 pounds per square inch. By 1941, however, such area will have been reduced to 6 per cent in spite of the fact the water producing area will increase by only 4 per cent between July 1, 1938, and January 1, 1941.

The result will be due primarily to the rapid lowering of pressure growing out of the progressively increasing rate of withdrawal, both of oil and water, as more and more area becomes affected by water. This condition makes apparent the urgent necessity of controlling the rate of production of both oil and water if pressures are to be maintained sufficiently high so any appreciable portion of the field is to continue its natural flow. It must be realized that producing water has as much influence in lowering reservoir pressure as has the production of oil. This conclusion makes it clear the necessity of plugging back wells immediately they begin to show appreciable volumes of water.

This condition may be indicated in another manner. The accumulative production by July 1, 1938, and January 1, 1941, is estimated at about 1,230,000,000 and 1,640,000,000 bbls. respectively, the latter figure amounting to only about 40 per cent of the ultimate of the field if operations continue at present rate of oil production and water increases. The condition will possibly be alleviated to some degree if the proper steps are taken to control the production of water.


1000# / SQ. IN. BY JULY 1, 1938
1000# / SQ. IN. BY: JULY 1, 1938 JAN. 1, 1941
LINE TO WEST OF WHICH MOST WELLS WILL BE COMPLETELY FLOODED BY: JUL. 1, 1938 JAN. 1, 1941
1000# / SQ. IN. BY: JAN. 1, 1941 JUL. 1, 1938 AT PRESENT (MAY 1, 1936)
750# / SQ. IN. BY JULY 1, 1941 AT PRESENT (MAY 1, 1936)
LINES TO WEST OF WHICH MOST WELLS WILL BE PRODUCING SOME WATER BY: JULY 1, 1938 JAN. 1, 1941
750# / SQ. IN. AT PRESENT (MAY 1, 1936) BY JAN. 1, 1941
1000# / SQ. IN.: AT PRESENT (MAY 1, 1936) BY JULY 1, 1938 BY JAN. 1, 1941
750# / SQ. IN. AT PRESENT (MAY 1, 1936) BY JAN. 1, 1941
LINES TO WEST OF WHICH MOST WELLS WILL BE COMPLETELY FLOODED BY: JULY 1, 1938 JAN. 1, 1941

Map of the East Texas field

However, the assumption that the wells within the water producing area will make 33⅓ per cent water may not be far different from conditions which will actually exist if nothing is done to regulate withdrawal rate of oil and water from this reservoir. At this time approximately 5.75 per cent as much water as oil is being produced from the 1,600 wells making water which represent about 7.6 per cent of the 21,087 wells in the field. This means the wells producing water at present are averaging roughly 40 per cent water.

It is strongly indicated if any appreciable part of the field is to maintain natural flow for any length of time after 1938, the rate of withdrawal, including both oil and water, will have to be held to a value not to exceed 400,000 bbls. per day, and preferably around 350,000 bbls. per day. If the reduction is deferred to some later date, an even more drastic cut will be required to obtain the desired results. If the reduction becomes effective now, the added benefit of more efficient flooding of the sand with attendant increased ultimate recovery will result.

Crescent Gusher

Mid Continent Petroleum Corp. No. 3 Campbell, NW SE NE section 33-17-4w, Crescent pool, Logan County, Oklahoma, an old well deepened from 6,255 feet to 6,287 feet, flowed 578 bbls. the first hour and 311 bbls. the following 30 minutes. It was shut in over night and on Tuesday morning was opened one hour and flowed 817 bbls. It produces from the second Wilcox sand.

W. A. Delaney No. 1 Sawyer, in section 7-1n-8e, on the Coal County side of the Jesse area in Oklahoma, penetrated a sand in the McAllister series at a depth of 60 to 90 feet below the grass roots, finding a good showing of live green oil.

Texas Crude to Toledo

Movement of Texas crude across Pennsylvania and Ohio to the Toledo refinery of Sun Oil Co. brings into use an extensive system which went into disuse when Atlantic Refining Co. discontinued delivery to Franklin and Pittsburgh.

Susquehanna Pipe Line Co., at Twin Oaks (near Marcus Hook), is the initial carrier of the Texas crude, delivering it to the National Transit line at Chester station. National Transit uses the facilities of the Southern Pipe Line at Millway for pumping north. Northern Pipe Line continues to the Ohio line.

Texas Commission Upheld

AUSTIN, Tex., Aug. 18.—Refusal of the Texas Railroad Commission to grant the Panama Refining Co. tenders for shipment of oil products from Louisiana produced crude oil was upheld in a three-judge federal court decision filed here Tuesday, written by Circuit Judge Joseph C. Hutcheson, with District Judges J. McMillan and T. M. Kennerly also sitting. The company sought to restrain the Texas commission "from enforcing those provisions of orders requiring proof as to the manner of production and sources of Louisiana oil imported and to be imported by complainants."

Airplane view of Old Dutch Refining Co. refinery, Muskegon, Mich.

Michigan Refiners Turn to Mid-Continent Crude to Expand Operations

By PAUL A. ELLIOTT

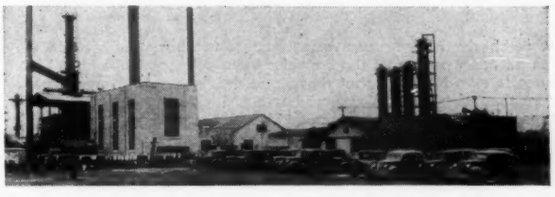
MUSKEGON, Mich., Aug. 17.—Faced with a critical shortage of crude due to declining production from Michigan fields and the failure of extensive wildcatting to open a new major field during the first seven months of 1936, four independent Michigan refineries, whose ranks may soon be swelled to six or more, have contracted for Mid-Continent crude supplies ranging from 1,000 to 3,000 bbls. daily for one or two years.

Early in 1936 officials of fully a dozen independent Michigan plants found themselves in a precarious position with regard to crude supply for two reasons: First, the state's average daily production was steadily declining from a peak of 55,000 bbls. in mid 1935 to a recent low point of less than 33,000 bbls. a day, and, second, a new 140-mile pipe line had been completed with a capacity of 25,000 bbls. or more standing ready to transport oil to Toledo refineries from central Michigan fields.

Several independent plants were beginning to feel the pinch of the crude shortage, some were shut down and a few were faced with bankruptcy when a plan to bring East Texas and Louisiana crude via barge line to a point 100 miles below Cincinnati and thence through a $6,000,000 pipe line to central Michigan was proposed by Pittsburgh interests.

While this plan failed to materialize, it did arouse the interest of several Mid-Continent operators, both majors and independents, in the possibilities of an outlet for some of their excess production through the starving Michigan plants. Refinery capacity of the state had been boosted from about 30,000 bbls. daily during the early part of 1935 to more than 40,000 bbls. as of January 1, 1936, with prospects of an additional increase to 50,000 bbls. or more this year.

As in many oil fields, the bulk of the state's production has been controlled by two or three major oil line and refinery operators. As a result independents not protected by their own supply of crude from producing wells were faced with a period of waiting, perhaps too great for survival, until Michigan wildcatters should open additional fields, thereby creating an abundant supply of surplus crude available at prices not too high for profitable operation.



Naph-Sol Refining Co. plant, Muskegon, Mich.

Though the Michigan refined products market had been limited principally to independent outlets for a comparatively poor grade of gasoline, the product of skimming units, several plants early discovered Michigan crude best suited to the production of naphthas and other solvents for the paint and cleaning trades with fuel oil as a close second because of the large home market in the industrial centers of the Lower Peninsula.

More recently the more ambitious independent refinery operators a year ago started negotiations to install cracking or reforming units, or both.

Because of the recognized difficulties involved in the attempt to manufacture a good grade of motor fuel from Michigan crude, the state became an open field for inventors of several new cracking processes. Established companies, certain they could conquer the low antiknock qualities which had been found in Michigan crude, also entered the new refinery area with assurances new methods and specially designed equipment would meet the operators' demands.

New companies were formed, stock issues sold, plants designed and construction started in many cases before the decline in crude supply was recognized an all-important factor.

A few of the better established plants were foresighted enough to assure their own crude supply by drilling wells in proved territory, laying pipe lines and contracting for crude over a long period or making other arrangements.

With the increasing shortage in crude came a rise in field prices from $1.02 a barrel early in 1935 to $1.42 a barrel on June 15, 1936, in four successive increases of 10 cents each.

With these prices the market became attractive simultaneously with the demand. As a result two distinct deals for shipping Mid-Continent crude to Michigan independents by pipe line, barge and railroad tankcar recently were closed.

The larger involves shipments of 5,000 to 10,000 bbls. daily from the Oklahoma City field by pipe line to Chicago, thence via pipe line to Carleton, a point on the Pere Marquette railroad, through the Buckeye pipe line and thence by railroad tankcar or truck to four refineries.

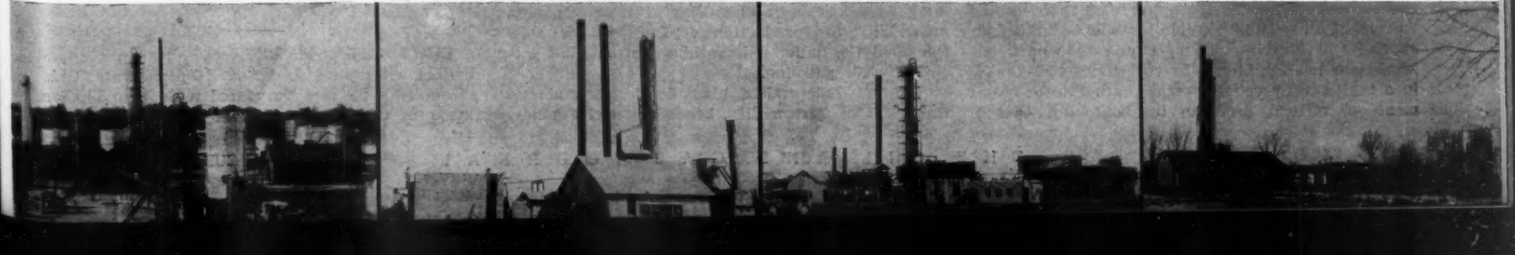
Erection of 15,000 bbls. of terminal storage soon will be under way at Carleton for Leonard Refineries, Inc., of Alma, operators of a 2,000-bbl. skimming plant soon to be increased to 3,000 bbls. capacity with a 1,000-bbl. Dubbs cracking and reforming unit by R. M. Parsons Co. of Chicago.

A two-year contract for 1,000 to 1,500 bbls. daily has been signed with Fred Morgan, head of the Morgan Petroleum Co., independent producer and refiner in the Oklahoma City field, who with several other operators has arranged for a supply of upwards of 10,000 bbls. a day for Michigan.

A similar contract has been closed with McClanahan Refineries, Inc., which placed a similar 1,000-bbl. Dubbs cracking and reforming unit in operation in St. Louis, Mich., about two months ago.

Though both of these plants previously had

Roosevelt Refinery, Mount Pleasant, Mich. *Superior Oil Co. refinery, at Elsie, Mich.* *McClanahan Refineries, St. Louis, Mich.* *Mid-West Refining Co. plant, Alma, Mich.*



crude supplies of their own in Michigan fields, the former through J. W. Leonard, Jr., who opened the Crystal-Montcalm field in March, 1935, and still holds large production there, and the latter headed by Walter L. McClanahan, Michigan's leading wildcatter and independent operator, they were glad to supplement them with Mid-Continent crude.

Two other plants near Detroit were the first to arrange for Mid-Continent crude through the Morgan company, namely: Inland Refineries, Inc., of Drayton Plains and Inter-Lakes Refinery at Flat Rock.

In a letter to the stockholders, Carl L. Skidmore, president of the Inland company, announced this 2,000-bbl. skimming plant would resume operations soon after August 1 with 1,000 bbls. a day assured from the Mid-Continent. Depending upon market conditions the daily take of outside crude may be increased to the plant capacity.

Ross S. Campbell, president of Inter-Lakes Refinery Co., announced August 1 his plant would be the first in Michigan to get its new supply of Mid-Continent crude under a similar contract for 1,000 bbls. a day. About 15,000 bbls. of storage will be erected and the crude trucked 2½ miles from the terminal to the plant, a cracking unit to be operated under patents held by the U. S. Hydrogenation Co. for a hydro-cracking vapor phase process.

Originally planned to operate solely on Michigan crude the unit now will be charged only with Mid-Continent oil, it is announced by company officials. About 25,000 bbls. additional storage will be erected at the plant.

Old Dutch Refining Co., of Muskegon, is the other Michigan plant which has contracted for Mid-Continent crude under a two-year agreement for a minimum of 2,000 bbls. daily for the first year and 3,000 bbls. for the second. The oil will be moved from Mid-Continent fields through the Texas-Empire pipe line to Chicago and thence to Muskegon across the lower end of Lake Michigan in two 6,000-bbl. barges chartered with a tug through the Ocean Transportation Co. of Boston.

The tug and barges were expected to arrive in Lake Michigan via the Great Lakes-St. Lawrence route about the middle of August to start the crude movement as soon as possible. It will be unloaded at the Old Dutch company's private wharf on Muskegon harbor, stored in two 10,000-bbl. tanks in a tank farm erected several years ago for shipment of refined products by boat and thence pumped to the Old Dutch plant through an 8-mile pipe line.

A $200,000 vapor phase cracking unit being erected by the T.V.P. corporation of New York City is expected to be completed before September 1 ready to utilize the new crude supply with a Michigan supply of about 1,000 bbls. daily.

An interesting phase of the Mid-Continent crude movement to Michigan is the fact a better grade of gasoline should be produced by blending than from all-Michigan crude. This is a practice heretofore available only to the major companies, such as Pure, Sun and White Star division, Socony-Vacuum Oil Co., shipping Michigan crude to their Toledo, Ohio, and Trenton, Mich., plants for blending with Mid-Continent crudes.

Completion of Michigan's major pipe line from the Crystal field to Toledo under a 50-50 arrangement between the Simrall Pipe Line Co. and Standard Oil Co. of Ohio gave the latter company a similar opportunity to purchase Michigan crude and blend it in Toledo. Shipments to Pure and Sun have been made by tanker from the former's storage farm at Bay City and probably will be continued.

Installation of the Toledo-Crystal line makes it possible for the Roosevelt Refinery at Mount Pleasant, largest independent plant in Michigan, to obtain Mid-Continent crude by reversing the flow, if necessary. This gives added protection to Roosevelt, which now has a plant capacity of about 8,000 bbls.

Naph-Sol Refining Co., of Muskegon, with pipe lines in the Muskegon and Ogemaw County fields, production in the Porter Township, Midland County field through an operating subsidiary, and agreements with the Pure also is assured a crude supply for its 6,000-bbl. plant.

The Naph-Sol company last year installed a $225,000 Dubbs cracking unit and this year erected a new 100-foot bubble tower, the largest in the state. The plant has been running to about half capacity, or 3,500 bbls. of crude daily.

The Roosevelt refinery has been running upwards of 7,000 bbls. daily in Mount Pleasant. Pure Oil Co., with a 3,500-bbl. skimming plant at Midland, also has been operating at near capacity, principally for production of fuel oil for Dow Chemical Co. under a long-time contract, but secondarily for gasoline.

Another independent plant is the Crystal Refining Co. of Carson City, headed by Del Fortney, president of Fortney Oil Co. and operator of a number of wells in several Michigan fields. The plant has been running about 1,000 bbls. with its capacity conservatively rated at 1,200 to 1,500 bbls.

Mid-West Refining Co. at Alma, headed by B. J. Skinner, has its own oil line from the Crystal field for a plant of 2,000-bbl. capacity but has been operating at not more than half capacity.

Superior Oil Co.'s 1,800-bbl. plant at Elsie, Mich., recently has increased its crude runs to about 600 bbls. daily, tripling its operations over June, it was announced by Raymond Lewis, general manager. Greater production was anticipated this month.

Sovereign Refining Co.'s smaller plant at Saginaw has been operating at nearly capacity, or 800 to 1,000 bbls. daily.

Sweet Oil Refining Co., dependent principally upon the output of the Home Township, Montcalm County, upper Traverse pool, recently producing about 250 bbls. daily, has been operating at about half capacity.

Producers Refining, Inc., of West Branch, which several months ago completed a 1,200-bbl. plant in the Ogemaw field, has been operating short of capacity but is expected to profit by steadily increasing output from Ogemaw wells.

Another Alma plant is to be completed within a few weeks by Wolverine Petroleum Products Co., reported to have negotiated for a supply of 1,000 bbls. of crude daily for a year. This will virtually meet its capacity.

The Simrall-Standard of Ohio pipe line has been running about 10,000 bbls. of crude daily, or less, through the Crystal-Toledo line.

Kent Refining Co., Grand Rapids, has a 500-bbl. still and 1,800-bbl. tower shut down due principally to lack of crude supply.

Pentagon Refining Co., at Plymouth, and American Petro-Chemical Co., operators of a hydrogenation cracking plant under a process invented by Henry Clay Wade, are operating short of their capacities of 1,200 and 625 bbls. daily.

Standard Oil of Indiana's 1,500-bbl. plant at Zilwaukee, near Saginaw, is the only plant shut down for a long period. The former H. H. Cross Co. plant at Muskegon has been dismantled for many months.

Virtually the entire gasoline, kerosene, fuel oil and distillate output of Michigan refineries has been marketed in Michigan with occasional shipments of fuel oil into the Toledo, Chicago and Milwaukee markets. Naphthas are shipped largely to Chicago, Detroit and close-in markets.

With a Mid-Continent crude supply assured, however, there may be shipments of Michigan gasoline into other states, though the home market is large enough to absorb the entire production of all plants erected to date.

It is reported the Inland and Inter-Lakes refineries near Detroit can get Mid-Continent crude delivered at $1.77 a barrel, or about the same as Michigan crude under present record posted prices, the highest in four years, while the combined pipe line and rail cost to Leonard and McClanahan Refineries, Inc., was reported $1.90 a barrel at the plants. The Old Dutch cost, because of the water haul across Lake Michigan from the Chicago pipe line, probably will be less than inland plants.

MICHIGAN REFINERIES, AUGUST 15, 1936

	Company and location—	Type	Barrels daily Crude capacity	Barrels daily Cracking capacity	Source crude
1.	American Petro-Chemical Co., Wayne	Skimming	600	0	Michigan
2.	Central Refining Co., St. Louis	Skimming	300	0	Shut down
3.	Crystal Refining Co., Carson City	Skimming	1,200	0	Michigan
4.	Inland Refineries, Inc., Drayton Plains	Skimming	1,200	0	Mid-Continent
5.	Inter-Lakes Refining, Flat Rock	Cracking	1,000	1,000	Mid-Continent
6.	Kent Refining Co., Grand Rapids	Skimming	2,200	0	Shut down
7.	Keystone Refining Co., Detroit	Skimming	1,500	0	Michigan
8.	Leonard Refineries, Inc., Alma	Skimming	3,000	*1,000	Michigan & Mid-Cont.
9.	McClanahan Refineries, Inc., St. Louis	Sk. & Cr.	3,000	1,250	Michigan & Mid-Cont.
10.	Mid-West Refining Co., Alma	Skimming	2,000	0	Michigan
11.	Naph-Sol Refining Co., Muskegon	Sk. & Cr.	6,000	1,200	Michigan
12.	Old Dutch Refining Co., Muskegon	Skimming	3,000	*1,500	Michigan & Mid-Cont.
13.	Pure Oil Co., Midland	Skimming	3,500	0	Michigan
14.	Pentagon Refining Co., Plymouth	Skimming	1,200	0	Michigan
15.	Roosevelt Oil Co., Mount Pleasant	Skimming	8,000	0	Michigan
16.	Sovereign Refining Co., Saginaw	Skimming	1,000	0	Michigan
17.	Superior Oil Corp., Elsie	Skimming	1,800	0	Michigan
18.	Sweet Oil Refining Co., Wyman	Skimming	1,000	0	Michigan
19.	Wolverine Refining Co., Alma	Bldg. Sk.	1,000	0	.....
20.	Producers Refining Co., West Branch	Skimming	1,200	0	Michigan
21.	Northern Refineries, Inc., Alma	Bldg. Sk.	1,200	0	.....
22.	Socony-Vacuum Oil Co., Trenton	Sk. & Cr.	12,500	6,000	Mid-Cont. & Michigan
23.	Standard of Indiana, Zilwaukee	Skimming	1,500	0	Shut down
24.	North American Petroleum Corp., Saginaw	Proposed	5,000	.....	.....
	Totals	Completed	54,200	9,450	4,000
		Building	2,200	2,500	.....
		Proposed	5,000	.....	.....

Total Mid-Continent crude contracted—7,000 to 8,000 bbls. By independent plants not including Socony-Vacuum using about 1,500 bbls. daily Michigan and the rest Mid-Continent.

*Installing.

(Note: Crude capacity figures given here were obtained from conservative sources familiar with capacities for which the plants were constructed and do not in all cases represent the capacity claimed by the operators.)

Operating plants are those where crude source is stated. Those shut down and thus not getting crude are listed shut down. The five independent plants other than the Socony-Vacuum shown to be getting Mid-Continent crude have but recently closed contracts but are expected to be operating on crude from this new source on or before September 1.

OBITUARIES

MELVIN E. LUSE, chief engineer for the Standard Pipe Line Co. of Louisiana, Ida, La., died in Shreveport last week. He was born at Carsonville, Pa., June 9, 1875, and resided in Pennsylvania until 1910, when he accepted a position with the Standard Pipe Line Co. at Ida, where he has been employed for 26 years.

ERNEST R. ALLEN, 52, oil field contractor, died suddenly at Longview, Tex., last week. He had worked in some of the Southwest's important oil fields, including those in West and South Texas and in Louisiana and Arkansas.

JAMES HIRAM McCRAY, 94, oil operator and drilling contractor, died Aug. 16 at Nowata, Okla. At one time he was associated with John Landon, father of Gov. Alf Landon of Kansas, in Ohio.

Rodessa Operators Name Committee to Limit Gas Waste as Bankers Meet

By MITCHELL TUCKER

SHREVEPORT, La., Aug. 17.—The possibility of more effective conservation and production control at Rodessa continued to look favorable during the past 10 days, as encouraging developments occurred from several sources.

Perhaps of most immediate and far reaching effect was the formation of the Rodessa Operators Committee in Shreveport. The function of this committee will be to develop a program for the elimination of natural gas wastage, to carry out the requests of Governor Richard W. Leche in his recent conference with operators relative to conservation matters, and to sponsor an engineering committee which will assemble and interpret all technical data from the field. To date the scope of this committee extends only to the Louisiana side of the field.

P. C. Murphy, superintendent of Phillips Petroleum Co., was selected as chairman of the operators committee. Appointed to serve with Mr. Murphy are the following representatives: Ted Hall, Tide Water Oil Co.; J. R. McWilliams, Standard Oil Co. of Louisiana; M. H. Marr, independent operator; R. J. Reinke, Danciger Oil & Refining Co.; J. G. Puterbaugh, McAlester Fuel Corp.; S. P. Borden, Drillers, Inc.; N. C. McGowen, United Gas Public Service Co., and C. N. Black, Magnolia Petroleum Corp.

The first decision of the operators committee was to employ a competent petroleum engineer on a full-time basis to head the Rodessa Engineering Committee, which would serve in a technical advisory capacity to the operators group.

H. W. Bell, of Shreveport, was selected for this capacity, and will have on his committee representatives from the engineering force of the various participating leaseholders in the field. Mr. Bell is a petroleum engineer of wide experience and is recognized as being well qualified for this responsibility, due to his previous service with the United States Bureau of Mines, the petroleum division of the State Mining Bureau of California, and the Louisiana Department of Conservation. He is a graduate of Leland Stanford University. Permanent offices for the engineering committee have been established in Shreveport.

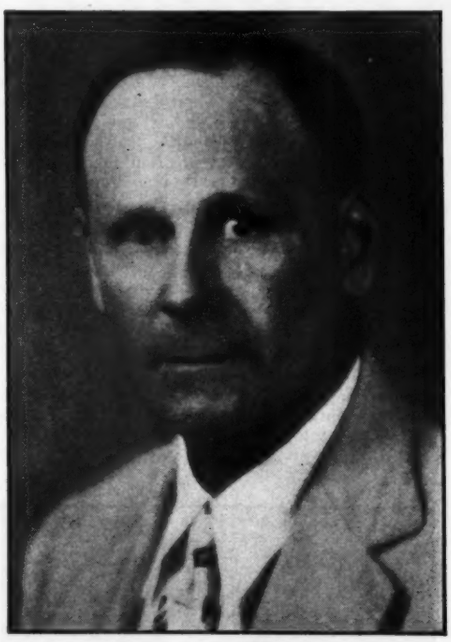
Several subcommittees were formed at the first meeting of Mr. Bell's group, including one to make bottom-hole pressure studies, another to consider salt water source and encroachment within the field, and others to advance means of reducing gas-oil ratios, etc.

Sixty-six key wells have been designated on the Louisiana side of the field to be the basis for the periodical bottom-hole pressure surveys, which are scheduled to begin immediately. The formation of gas caps, migration of oil across property lines, control of gas coming out of solution in low pressure areas, and pressure maintenance, are examples of the studies to be made from the periodical survey data.

Whether the salt water now appearing in quantities ranging from 1 per cent to 66 per cent in 48 of the 258 Louisiana-Rodessa wells is trapped or extraneous has long been a controversial issue among geologists in the field. Detailed studies along this line are to be made, in the light of all available data, to determine its exact source and means of control.

All feasible means of reducing high gas-oil ratios will be studied by the committee. It was hinted by several operators at the recent Texas Railroad Commission hearing on Rodessa that many wells could not make their allowable if their ratio was restricted. The present Texas ruling permits a ratio of 2,000 to 1, while there is no restriction for the Louisiana wells. Some operators now express hope that through cooperative agreements the ratios can be brought to as low as 1,000 to 1 in most parts of the field.

Although the use of packers in Rodessa wells has heretofore been considered impractical, this method of conserving gas is now receiving some consideration. The setting of what is known as "short strings" at or below the point of gas-oil contact is expected to be recommended for many wells by the engineering committee. Standard Oil Co. of Louisiana made the first step toward the conservation of gas this week when it moved in rig on its No. 5 Lawton, section 14-23-16, in the high ratio area of the field, to rework the well so that it may produce in a more efficient manner.



H. W. BELL

Orders for the Texas side of the field have not yet issued from the Texas Railroad Commission hearing held at Jefferson on August 5. The Louisiana commissioner of conservation is awaiting recommendations from the recently formed Rodessa Operators Committee, which Governor Leche has asked for within 30 days.

Bankers Consider Situation at New Orleans Meeting

NEW ORLEANS, La., Aug. 17.—Oil conservation laws of Texas and Louisiana were praised here Saturday at a meeting of leading bankers and independent oil operators of the two states who joined in pledging cooperation toward preserving the resources of the Rodessa field, bi-state pool, to prevent waste and promote the general economic interest of the public.

Nathan Adams, president, First National Bank of Dallas, Tex., declared following the meeting that "Louisiana has the biggest future oil reserve of any state in the Union." The conferees, meeting in executive session at the invitation of the Louisiana Bankers Association, gave special endorsement to the recent oil conservation law signed by Governor Richard W. Leche of Louisiana.

In explaining the bankers' interest in the oil program of Texas and Louisiana, Mr. Adams termed oil "a real cash crop." He said it has supplanted cotton in Texas as the money "crop."

"It is fast-moving," he said. "You don't have to wait a year to sell it. Your money is available every 30 days. Oil is what pulled Texas through the depression, and what we want to do here is to agree mutually on a program that will prevent the uncontrolled development of a new field and the return of 10-cents-a-barrel oil."

It was made clear by the Texas group they were not seeking any change in the present Louisiana oil conservation law, referring to the new statute as "as good a law as any state in the Union has for controlling production." They expressed hope, however, that Louisiana would join the Interstate Oil Compact.

George A. Hill, Jr., of Houston, vice president of the American Petroleum Institute, outlined some of the problems encountered in Texas when that state's great fields were discovered. Also speaking briefly was Charles F. Roeser, Fort Worth, president of the Independent Petroleum Association of America, who dealt with methods of coping with the Rodessa field's problems.

Louisiana bankers addressing the meeting praised Col. E. O. Thompson, chairman, Texas Railroad Commission, for his efforts in behalf of oil conservation, and T. H. Nees of Beaumont, president, Texas Bankers Association, joined with the Louisiana bankers in agreeing that representatives of the oil industry should meet more often with state authorities to discuss conservation plans.

Two resolutions, drafted by J. Blanc Monroe, New Orleans attorney, were formally adopted by the Louisiana Bankers Association representatives at the close of the meeting. One expressed gratification over Louisiana's new oil conservation law, and the other called for the appointment of a committee of bankers to meet with a similar committee from Texas to discuss common problems.

Besides those named, Texas men attending the conference or scheduled to attend were J. D. Collett of Fort Worth, president, Mid-Continent Oil and Gas Association; R. Lloyd Wheelock of Corsicana, president, Texas Petroleum Council; E. B. Germany of Dallas, former president, Independent Petroleum Association of Texas; Marion S. Church of Dallas; P. McGaha of Wichita Falls, president, North Texas Oil and Gas Association; E. L. Smith of Dallas, chairman, East Texas Chamber of Commerce oil committee; Jake Sandifer, West Texas Oil and Gas Association; W. H. Francis of Dallas, vice president and general counsel of the Magnolia Petroleum Co.; N. Suttle Roberts, chairman of the oil committee of the Texas Bankers Association; Tucker Royall, chairman of the First National Bank of Dallas; Fred F. Florence, president of the Republic National Bank, Fort Worth; R. E. Harrinding, president of the Fort Worth National Bank; John N. Sparks, president of the First National Bank of Fort Worth; A. D. Simpson, president of the National Bank of Commerce of Houston; P. B. Doty, president of the First National Bank of Beaumont; Ernest L. Brown, vice president of the Alamo National Bank of San Antonio; E. Winton of the Continental Bank of Fort Worth, and a representative of the Frost National Bank of San Antonio.

Pipe Line Activity

Cunningham Pool Outlet

The new 6-mile pipe line outlet for the Cunningham pool 6 miles northeast of Canton in eastern McPherson County, Kansas, has been tested and Lario Oil & Gas Co. is taking oil from the discovery well. The crude is being run to Globe Oil & Refining Co. refinery at McPherson Kans.

Magnolia Salvages Line

FORT WORTH, Tex., Aug. 17.—Magnolia Pipe Line Co. is taking up 14 miles of 8-inch oil line between its Midland tank farm and the Church and Fields pool in Crane County, salvaging part of it and using part of it at its gasoline plant now under construction at Kermit in Winkler County.

Arkansas Line Planned

EL DORADO, Ark., Aug. 15.—Plans were announced by officials of the Root Refining Co. and the Lion Oil Refining Co. for the construction of a joint line from the two plants at El Dorado to the Ouachita River for transportation of gasoline and light oils. The products will be distributed on the Ohio and Mississippi Rivers and along the gulf. Construction is expected to start immediately.

Repairing Line to Wyoming

O. C. Whitaker, Inc., Burkburnett, Tex., has a full crew working on the old 12-inch Stanolind pipe line west of Gothenburg, Neb., electric welding screw joints and making general repairs. This work will be carried on to the west into Wyoming and will require some time to complete.

Dickey Extends Pipe Line

Dickey Oil & Refining Corp., operating a plant at McPherson, announces a 4-inch line, 9 miles in length, will be built to the north end of the Graber pool of southeastern McPherson County connecting with the company's line in the south end of the Ritz-Canton pool. Dickey has production, a refinery at McPherson and 60 miles of pipe line, mostly in McPherson County.

Grand Rapids Hearing

MUSKEGON, Mich., Aug. 17.—Hearings on petitions of the city of Grand Rapids, Mich., and the Grand Rapids Gas Light Co. to enjoin the Michigan Public Utilities Commission from carrying out its order permitting only a 50-50 per cent mixture of natural gas from the tri-townships field of central Michigan and manufactured gas, once postponed until August 17 have been further delayed until August 31.

Meantime the company is proceeding rapidly with the changeover for 100 per cent natural gas from wells under contract in the Michigan field, many of them already connected with the company's recently completed $500,000 pipe line to Grand Rapids. The changeover is expected to be completed about October 1 with more than 5,000 of the company's 38,000 customers already being served with 100 per cent natural gas despite the state commission's order.

Gas Line to Refinery

MUSKEGON, Mich., Aug. 17.—West Michigan Consumers Co., operator of a compressor plant in the Muskegon oil and gas field servicing about 25 industries of Greater Muskegon, last week obtained permission from the Muskegon city commission to lay that part of a 6½-mile 4-inch line in the city limits from the Old Dutch Refining Co. plant to the compressor station.

The line will transport by-product gas from the Old Dutch company's new T.V.P. vapor-phase cracking unit to be completed about August 20.

The line is designed to handle about 1,000,000 feet of gas daily, virtually doubling the supply of the West Michigan company now comprised of about 500,000 feet daily of by-product gas from the Naph-Sol Refining Co.'s Dubbs cracking unit, and a like amount of casinghead and dry gas from wells in the Muskegon field.

The first barge shipment of Mid-Continent crude oil from the Chicago terminal of the Texas-Empire pipe line, is expected to arrive at the Old Dutch wharf on the Muskegon harbor whence it will be pumped 8 miles to the refinery from storage tanks near the dock. New pumping equipment is being installed.

East Texas-Mississippi Line

FORT WORTH, Tex., Aug. 17.—It is reported East Texas Pipe Line Co., headed by Freeman W. Burford of Dallas, will lay an 8-inch gasoline line from its refinery at Longview, East Texas, to Natchez, Miss., via the Rodessa, La., field, where the Burford interests have a gasoline plant and a number of wells. The line, it is said, would make gasoline available by cheap water shipment up the Mississippi River.

Lusk-Fort Laramie Line

Illinois Pipe Line Co., subsidiary of Ohio Oil Co., is planning construction of a pipe line from Lusk to Fort Laramie, Wyo., a distance of 40 miles to transport Lance Creek field crude to a connection with the trunk line of Stanolind Pipe Line Co. (Standard of Indiana) from Wyoming to Missouri. The building of the line will depend on outcome of negotiations now under way for sale of Lance Creek crude to Stanolind.

Natural Gas News

Tulsa Gas Franchise

A proposition for a 25-year franchise for the Oklahoma Natural Gas Co. in Tulsa will be decided September 29 at a special election.

In a letter to the city commission, Joseph Bowes, president of the company, said:

"The natural gas business is, as has been repeatedly stated, continuously and constantly a business of tomorrow. We must always be on the lookout for additional reserves and must have available the necessary facilities to connect with our system. There is no indication that our present system is not ample in Tulsa and elsewhere.

"However, it is generally conceded that the present producing fields are being depleted. There is a great abundance of gas, both south and east and also southwest of Tulsa at a distance of from 100 to 200 miles. We would not be doing our duty to our customers or stockholders if we did not look ahead at least 10 years. A franchise will afford the security which we will have to have in order to protect these reserves.

"During the latter part of 1934 a citizens' committee appointed by the mayor prepared after extensive research and study a proposed model franchise. This franchise was for the purpose of definitely establishing the relationship of the company serving gas to the citizens of the municipality. The company cannot secure its financial requirements, on the best terms, for the purpose of extending, renewing and enlarging its system and for the purpose of acquiring new gas reserves and laying of new lines to newly discovered gas fields unless it can give some guarantee to investment bankers that it will be in business during the period of the loans.

"We would be much better enabled to guarantee the high standard of service which we have been rendering if we are given a legal permit to continue to do business."

Reconditioning Magnolia pipe line at Brazos river crossing near Kopperl, Texas

Southern Union Gas

F. W. Smith, secretary of the Southern Union Gas Co., says the Albuquerque Natural Gas Co., under its proposed recapitalization, will exchange its present outstanding securities for new securities. He said that the new capitalization of the company will be $1,750,000 first mortgage 15-year 5 per cent sinking fund convertible bonds, $1,074,500 of 6 per cent cumulative convertible preferred stock representing 21,490 shares out of an authorized issue of 60,000 shares, and 228,215 shares of common stock out of an authorized issue of 600,000 shares. Incident to the recapitalization additional working capital will be supplied, Smith said.

Under the recapitalization the present outstanding debentures will be exchanged for preferred and common stock and the funded debt reduced from $3,391,500 of bonds, debentures and notes now outstanding to $1,750,000 of first mortgage 5 per cent bonds above mentioned.

Louisiana Gas Tax

BATON ROUGE, La., Aug. 17.—Exemptions from the natural gas sales tax on sales for industrial and manufacturing purposes do not apply except on the final sale to the industrial or manufacturer user, under the recent sales tax imposed under Act 203, according to Attorney-General Gaston L. Porterie, in a recent interpretation.

Clause (b) to which this ruling applied reads as follows: "This tax shall apply to each and every person, firm, corporation or company, on each and every sale, and shall be absorbed by the seller and in no instance be passed on to the consumer. Provided, that said tax shall not apply to natural gas sold and used as fuel for industrial or manufacturing purposes in industrial or manufacturing establishments in this state. Provided, further, that said tax shall not apply to any sale by any lessor of any gas accruing to such lessor's royalty interest. That said tax shall be paid to the state of Louisiana and collected by the supervisor of public accounts in the manner hereinafter provided."

Refinery Projects

New Western Kansas Refinery

McPHERSON, Kans., Aug. 15.—A new outlet for the Shallow Water field in Scott County, Kansas, was seen with the announcement of the Shallow Water Refining Co. that it was breaking ground for construction of a 500-bbl. refinery 13 miles south of Scott City. Plans call for the plant to be completed in the next 60 days and allow for future expansion of 1,500 to 2,000 bbls. daily. The company is a new concern, subscribed largely by McPherson capital.

Wolverine Construction Resumed

MUSKEGON, Mich., Aug. 15.—Construction of the Wolverine Petroleum Products Co.'s new 1,200-bbl. refinery at Alma, Mich., has been resumed under the direction of E. G. Guy. Work on the skimming plant was started about a year ago, but has been suspended for several months. New contract for completion within several weeks recently was let.

Mr. Guy also has been awarded a contract to build a similar 1,200-bbl. skimming plant for the Northern Michigan Refining Co. at Alma on which ground has been broken for the foundation.

New Michigan Storage Center

MUSKEGON, Mich., Aug. 15.—Pure Oil Co. officials last week announced they will utilize one of eight 55,000-bbl. tanks at Bay City, Mich., erected several years ago for crude oil, as a new eastern Michigan storage and distribution center for gasoline.

Great Lakes tankers, which have been transporting crude oil produced in central Michigan fields and piped to the Bay City waterfront storage farm, will bring back gasoline from Pure's Toledo refinery.

Heretofore Pure has maintained its principal bulk gasoline storage center for eastern Michigan at Detroit. Cities within a radius of about 100 miles of Bay City will be served through the new marketing arrangement.

Universal's Position Unchanged

CHICAGO, Ill., Aug. 17.—The patent agreement recently arrived at between Donnelly Process Corp. and Gasoline Products Co. will have no effect on the attitude of Universal Oil Products Co. toward Donnelly licencees who are infringing the basic Dubbs clean circulation patent or any other patent owned by Universal.

The Dubbs clean circulation patent was validated by the U. S. District Court and affirmed by the Circuit Court of Appeals. The U. S. Supreme Court refused to interfere with this finding.

The attitude of Universal Oil Products Co. was made clear today by an official of Universal, who stated that no agreement between Gasoline Products Co. and Donnelly Process Corp. can convey any rights or extend any immunities to Donnelly licencees or anyone else so far as the Dubbs process or Universal patents are concerned. Only Universal can do that.

A number of lawsuits brought by Universal are now pending against Donnelly licensees and these will be carried through to a conclusion, it was stated.

Gainesville Refinery Started

GAINSVILLE, Tex., Aug. 15.—Construction of the Gainesville Refining Co.'s new refinery on the E. T. Spires farm, east of here, is under way. Refining equipment is now on the ground and an office building and laboratory are under construction. The plant will have a skimming capacity of 2,000 bbls. daily. G. A. Mattson, general manager, of Oklahoma City, and Bob Mahoney, superintendent, have charge of construction.

North Texas Oil & Refining Co. also obtained a permit this week for construction of a 1,000-bbl. plant to be located here. R. L. Knight is at the head of this company. Tydal Refining Co. is also reported to be planning construction of a new plant near Gainesville.

Thus the Anderson-Kerr pool, 3 miles east of Gainesville in Cooke County, will soon have a much greater outlet for its crude oil. At present the pool is sadly in need of a market since its only outlet is by tankcar from a small loading rack on the nearby M.K.&T. Railroad.

To Use Mid-Continent Crude

CLEVELAND, Ohio, Aug. 15.—National Refining Co. has announced that it would cease handling crude from the Lima field, Ohio, at the end of 90 days. In a letter addressed to northwestern Ohio producers, President W. H. Lamprecht said that the steadily decreasing volume of Lima crude made its abandonment necessary. The company has used up to 100,000 bbls. of Lima crude monthly at its Findlay, Ohio, refinery. Crude from the Oklahoma and Texas fields, which now supply about one-half of the refinery's supply, will be used entirely after the expiration of this period, he said. The step will affect hundreds of small operators of stripper wells in northwestern Ohio.

Kent May Reorganize

MUSKEGON, Mich., Aug. 15.—Possibility of reorganization of the Kent Refining Co., thrown into receivership and bankruptcy proceedings in Grand Rapids, Mich., before getting into operation with a new 1,800-bbl. skimming plant several months ago, was seen in latest developments in U. S. District Court.

Kirk E. Wicks, master in chancery, recommended to Federal Judge Fred M. Raymond either immediate confirmation of a reorganization plan from which the company recently sought to withdraw, or liquidation.

Natural Gasoline

Bureau of Mines June Report

The daily average production of natural gasoline showed an increase of 67,000 gallons in June, according to a report prepared by the Bureau of Mines. The average in June was 4,504,000 gallons compared with 4,437,000 gallons in May. General increases were recorded for the California fields. The daily average production of the East Texas field set a new record of 404,700 gallons compared with 380,900 in May. The average for Oklahoma showed no change. Total production in the first six months of 1936 was 839,328,000 gallons or over 7 per cent greater than in the corresponding period for 1935.

Production of the various districts, in thousands of gallons, for June was as follows: Appalachian, 4,254; Illinois, Michigan and Kentucky, 707; Oklahoma, 32,231; Kansas, 2,606; Texas, 38,771; Louisiana, 4,022; Arkansas, 1,014; Rocky Mountain, 5,375; California, 46,134.

Stocks of natural gasoline continued to increase, the gain in June being from 237,888,000 gallons on hand the first of the month to 244,818,000 gallons on June 30. The major part of the increase was recorded in stocks at refineries. These stocks increased from 114,156,000 gallons at the first of the month to 119,952,000 gallons on June 30, stocks at plants and terminals increasing from 123,732,000 to 124,866,000 gallons in the same period. The greater part of the increased refinery stocks was due to the increase in stocks held by refineries on the West Coast.

Daily average shipments of natural gasoline to refineries increased from 3,428,000 gallons in May to 3,637,000 in June, while exports rose to a daily average of 350,000 gallons as compared with only 171,000 in May. The average vapor pressure for deliveries to refineries was 19.9 pounds.

Plant Enlargement Started

SHREVEPORT, La., Aug. 15.—Arkansas Fuel Oil Co. has begun work on the enlargement of its absorption plant at Rodessa, where it plans to increase the daily capacity from 40,000 to 60,000 gallons.

UNION SULPHUR CO.'S REPRESSURING PLANT

View of Union Sulphur Co. repressuring plant in the Gillis field, Coastal Louisiana. Recent revision of the plant's compression units increased the gas capacity from 1,400,000 feet daily to 4,500,000 feet daily. This was done by changing the plant's one three-stage compression unit into three single-stage units. The gas from the field is passed to the plant where it is converged through two back pressure relief valves, set at 950 pounds. It is then passed through a flow meter into a 1,000-pound separator where it is taken into a suction header to each engine with an intake pressure of 950 pounds.

Efforts to Control Two Wild Wells on Texas Gulf Coast Baffle Engineers

By NEIL WILLIAMS

HOUSTON, Tex., Aug. 17.—The wits of man and skill of petroleum engineering are being put to the test again in efforts now under way to kill two wild wells on the Gulf Coast. These wells, in widely separated areas, one a wildcat in Hardin County, upper Texas Coast, and the other in the Greta field, Refugio County, lower Texas Coast, are cratered, preventing any attempts to cap them. So far neither well has shown signs of bridging so it is up to the ingenuity of engineers to stop the excessive drainage of reservoir energy in these respective areas.

National Petroleum Corp. No. 1 St. L. & B. M. (Missouri Pacific), in the Greta field, has been out of control since June 29. It was brought partially under control July 1 when crews of H. L. Patton Co. were successful in stabbing connections on the well, but shortly afterward the casing cut out below the connections and the well started to crater. In the loose, unconsolidated formations that characterize the Gulf Coast there is little to prevent cratering of a well once the pressure breaks through behind casing.

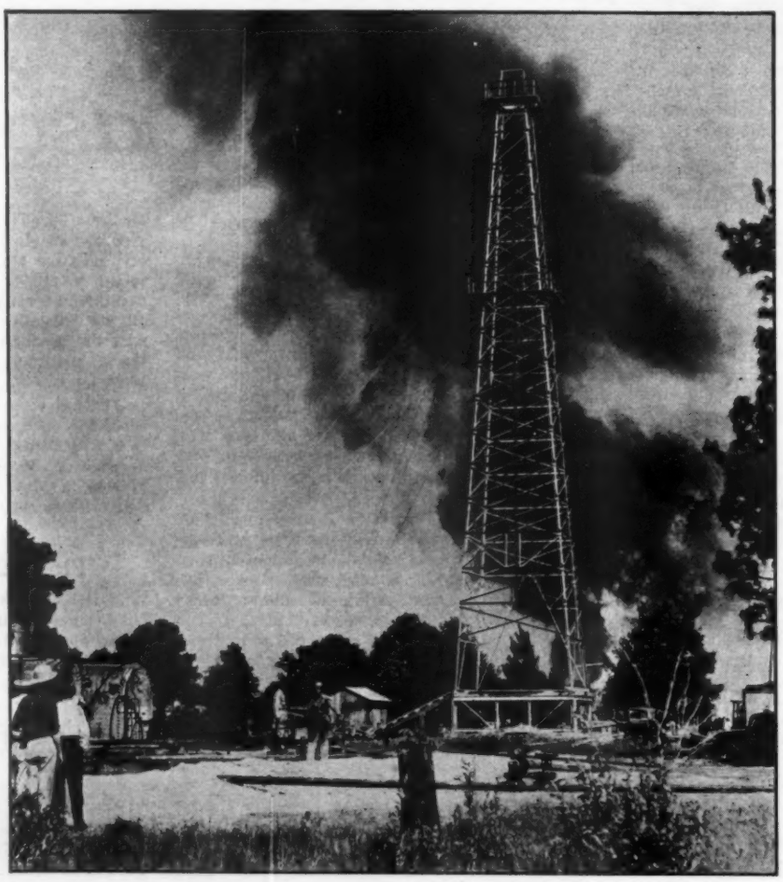
ON RIGHT OF WAY

This well is on the railroad right-of-way, between the railroad tracks and the Houston-Refugio concrete highway which parallels the railroad. The enlarging crater has now spread to take in the tracks, forcing the railroad to lay a loop in a new right-of-way around the crater at a safe distance. Also, the crater has undermined the highway, and a detour route following the new railroad tracks is under construction.

The well is making considerable gas and salt water but very little oil. It blew out around 4,200 feet with only surface casing in the hole. Once the well was struck by lightning and caught fire, but the blaze was extinguished by special chemicals and facilities provided by Tex Bradford, oil fire fighter. Atlantic Pipe Line Co. pump station and tank farm is just across the highway from the edge of the crater. Corrugated iron shields have been erected in front of the tanks for protection from fire and other damage.

Republic Production Co. and Houston Oil Co. No. 1 Brooks, the Hardin County wildcat crater well, about 9 miles north of Silsbee, blew out on the morning of August 5 while operators were coming out of the hole after making a drill stem test of a sand at a total depth of 6,982 feet. All except three joints of drill pipe were out of the hole. Although 7-inch casing was in the hole to 6,953 feet, where it had been cemented in preparation to test the sand, the well cut out at the surface through and behind the casing, cratered and caught fire. Only the boilers and an engine were saved as the crater engulfed the drilling equipment and derrick. The crater now is more than 100 feet across and is spreading.

This well has been making an estimated 35,000,000 to 40,000,000 feet of gas and from 400 to 500 bbls. of oil daily. Although coming in under undesirable circumstances, it definitely proves the existence of another field. The productive horizon is the Cockfield with the field on the so-called "Conroe trend."



Rigging up relief well to be drilled by Republic Production Co. and Houston Oil Co. in an attempt to kill their No. 1 Brooks wildcat which blew out, cratered and caught fire. The flaming well is in the background

Soon after the well blew out and cratered, preparations were started for drilling of a "relief" well approximately 750 feet south and west. Three high-pressure boilers have been set up, the derrick has been erected and the rig is being moved on. At the same time a 4-inch water line has been laid from the Neches River, a distance of 4 miles, which will furnish an adequate supply of water for drilling and for combatting the fire.

Plans call for drilling the relief well vertically to around 2,000 feet, at which point engineers of the Eastman Oil Well Survey Co. will take over supervision of the drilling in an attempt to deflect the hole to a point in the producing sand near the bottom of the blowout well. Then when 7-inch casing has been run and cemented, and screen and tubing set, water will be pumped through this well into the sand with a view to kill the pressure in the blowout.

The procedure will be similar to that followed in killing Harrison & Abercrombie's notorious crater producer in the Conroe field a couple of years ago. That well was killed within 48 hours after pumping of water was started into the sand through the relief well drilled for that purpose. In that undertaking, the relief well, 414 feet from the crater well, was drilled vertically to approximately 1,400 feet, where the hole was deflected and drilled to a point calculated to be within 20 feet of the bottom of the crater well in the 5,100-foot producing sand. With casing cemented, and screen and tubing set, water was pumped into the sand at the rate of 18,000 to 20,000 bbls. daily. The water broke through into the sand after a pressure of 1,800 pounds had been built up by compounding of the pumps.

GREATER DIFFICULTIES

Considering an additional 2,000 feet of depth in the Republic well and somewhat higher pressures, it is possible killing this well may entail somewhat greater difficulties. At the time the success of the Conroe job was looked upon as one of the greatest engineering feats accomplished in the petroleum industry. It introduced directional and controlled drilling to the Gulf Coast.

Drilling of the relief well is faced with hazard of blowout from the shallow sands charged with high-pressure gas from the crated well. To protect the hole from high pressures in the upper surface formations, a first string of pipe will be run around 300 to 400 feet and cemented from bottom to top. Then at 2,000 feet where deviation of the hole will start, a second surface string will be cemented. It probably will not be necessary to run another string until the sand is reached, when 7-inch pipe will be run.

Crews of M. M. Kinley Co. are directing these operations. Water and steam lines have been laid around the crater, the water to be supplied through the 4-inch line from the Neches River. Shooting will be tried first, and cables have been strung across the crater for running the nitroglycerin.

A relief well also is being drilled for the Greta crater well. This is being put down under contract by O. W. Dyer, drilling contractor of Corpus Christi. It is in the old railroad right of way north of the crater. Plans call for drilling the hole vertically to the 2,100-foot sand, where 10-inch casing will be cemented, and an attempt made to establish circulation through this sand to the crater well. If this fails, the hole probably will be deepened and deflected to the bottom of the crater well.

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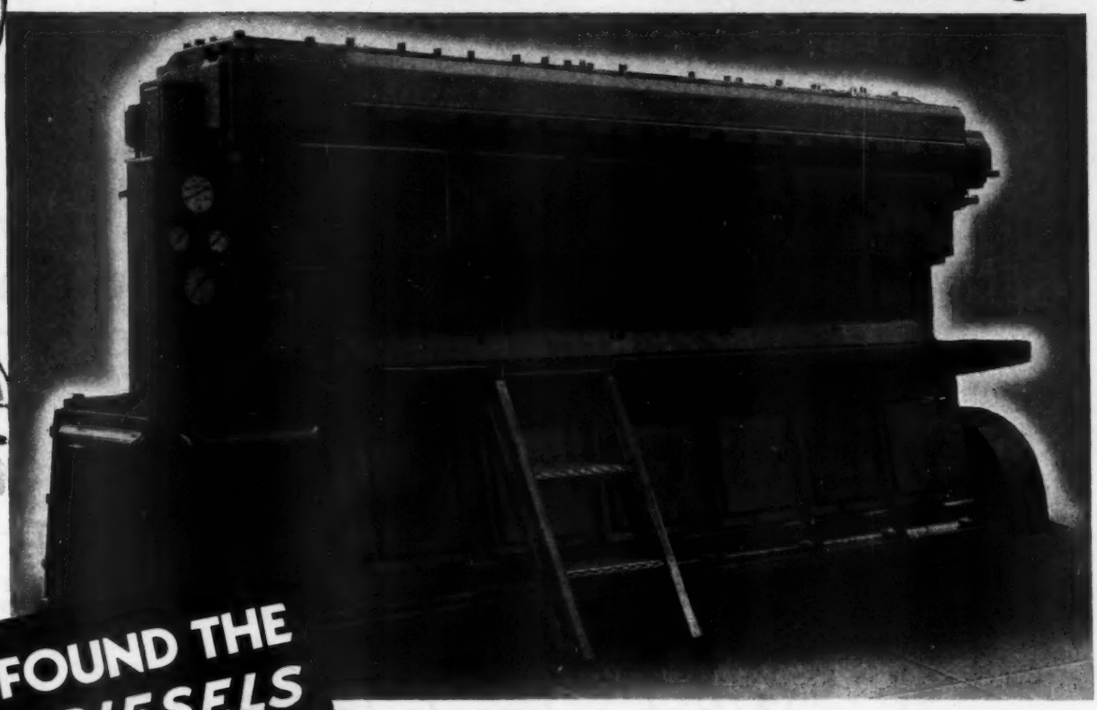

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Carter and Love County, Oklahoma, Wildcat Play Crosses Texas Boundary

By DAL DALRYMPLE

The wildcat drilling campaign in Carter and Love Counties, Oklahoma, where deep pay sands are sought, has extended across the Red River into Cooke County, Texas, where Sinclair Prairie Oil Co. has taken over an old test started by Sunray Oil Co. and is rigging up to deepen in quest of the Deese and Ellenberger pay horizons.

It is the No. 1 McColl, at 283 feet north of the south line and 1,059 feet east of the west line of the W. H. White Survey, Abstract 1,134, on a 164-acre tract. It is in the Cooke's Bend sector of the Red River, south and west of wildcats now drilling in Love County and northwest of a wildcat that recently was dry and abandoned in the Thackerville area of Love County. The Sunray company drilled No. 1 McColl to 4,700 feet and ran out of hole. It found formations high in correlation with the Sinclair Prairie No. 1 Stockton, wildcat in Love County to the north, and prospects are considered favorable for production. In a deal with Sinclair Prairie, the Sunray company retained one-fourth interest in a 4,000-acre block and one-half interest in a 3,000-acre block. For its share in the two blocks, Sinclair Prairie paid an unannounced amount of cash and agreed to drill the deep test. It is to drill the No. 2 McColl in a new hole, to 6,000 feet or deeper if necessary. It may test the Deese series, and the Ellenberger formation, below 6,000 feet.

Fate of the Sinclair Prairie No. 1 Stockton, SE SE SW section 26-6s-2w, deepest active wildcat in Oklahoma, was still undetermined. On a recent test it swabbed 415 bbls. of fluid through 2½-inch tubing, including 112 bbls. of water, and swabbing was continuing. It topped Simpson Dense lime at 8,440 feet; total depth, 8,553 feet. The well failed to flow after acidizing with 10,000 gallons, and after a 418-bbl. load was pumped into the hole, swabbing began. A total of 780 bbls. of oil was swabbed from the hole during the week. This wildcat swabbed around 100 bbls. of oil daily from 5,500 to 6,200 feet, but operators decided to deepen.

On the east side of Love County, Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 1 Westheimer-Daube, SW SE SW section 27-6s-2e, was dead after swabbing and flowing spasmodically for a considerable period, producing from Viola lime at 2,430-2,970 feet, after plugging back from 7,363 feet, total depth. Efforts to make a commercial producer to date have been unsuccessful.

W. H. Riddle and others No. 1 Johnson, C SW SE section 20-8s-2w, 1½ miles north of the Red River, in Southern Love County, had reached contract depth and was shut down at 3,510 feet. It is thought probable this test will be carried deeper. It is about 10 miles northwest of the new pool near Gainesville, Texas.

The Texas Co. and others No. 1-B Cathey, SE NE NE section 6-5s-1w, wildcat southeast of the Hewitt pool in Carter County, has increased production by deepening. Completed several weeks ago, it pumped at the rate of 15 to 25 bbls. of oil a day from total depth of 4,186 feet. Operators recently deepened to 4,377 feet, 7 feet in sand, and it flowed 290 bbls. of oil in three hours before being shut in for tankage. Gravity of the oil is 39.7. Preparations were being made for a test. Production estimates range from 500 to 1,200 bbls. daily.

Southwest of the Cathey wildcat and near the Love County line, Carter Oil Co. and others No. 1 Voorhees, C SE SW section 34-5s-2w, was at 8,140 feet in lime and shale and was coring and drilling ahead in quest of deep pay. It is the second deepest drilling well in Southern Oklahoma, and was being watched with much interest. Location of all of the wells discussed in the foregoing paragraphs are shown on the accompanying map.

Not shown on the map, but in the Fox pool, north of the Healdton field and the town of Healdton, shown at the northwest corner of the map, is the Carter Oil Co. and others No. 1 Williams, the well that started the Southern Oklahoma wildcat campaign last year when it tapped a deep sand and blew in as a gusher from below 8,000 feet. When completed several weeks ago, it showed for around 3,000 bbls. of oil daily. Gulf Oil Corp. and others No. 8 Johnson, C SW SW section 28-2s-3w, the second deep test is to be drilled in the Fox area of Carter County, was drilling in Woodford Chert at 6,906 feet.

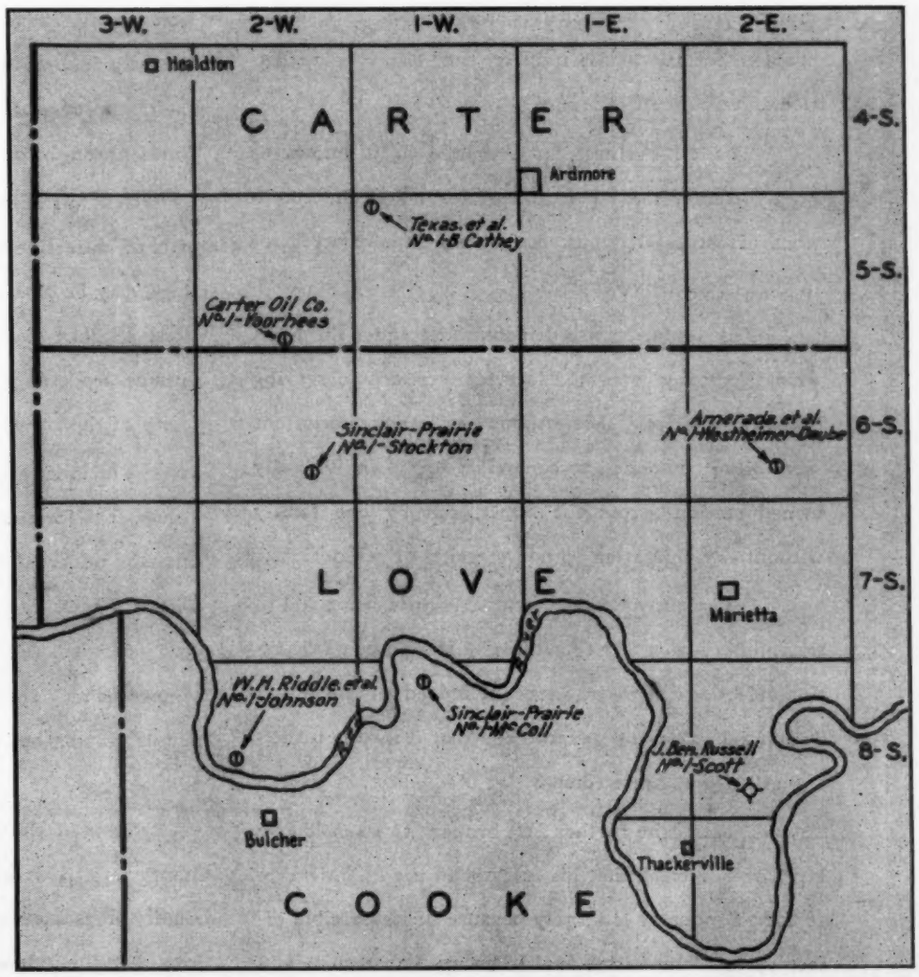
To the east of the area shown on the map and in Marshall County, Oklahoma, Helmerich & Payne No. 1 Taliaferro, NW SE SW section 26-5s-5e, was drilling in Caney shale at 4,355 feet. This test, 1 mile east of the town of Madill, will be carried to 6,500 feet or more. Preparations were being made to deepen another Marshall County wildcat that stopped at 5,461 feet more than a year ago. This was the Patsy Oil Co. and others No. 1 Vittitoe, C NE SE section 11-5s-4e. It was started by Paul Robb and associates and carried to present depth. The Patsy company took it over recently with the announcement that it would be deepened 1,000 feet or more. It topped Hunton lime at 5,147 feet; Viola lime, 5,457 feet.

Preparations were under way to start a deep wildcat in Stephens County, adjoining Carter County on the northwest. Ed V. Parsons, Fort Worth, Tex., operator, was reported to have completed deal for a 7,000-foot wildcat test on a big block of leases 13 miles northwest of Duncan, in Stephens County, at No. 1 Olson, C SW SW section 21-2n-8w. It will be the deepest well ever drilled in Stephens County if taken to the contract depth.

Extends Sulphur Bluff

FORT WORTH, Tex., Aug. 18.—Hager and others No. 2 Worsham, in the A. O. Wetmore Survey, second test in the Sulphur Bluff pool, Hopkins County, cored 32 feet of Paluxy sand at 4,521-57 feet, first sand being cored at 4,477 feet. It is sure of making a producer and will extend the field about 1,000 feet to the southwest.

V. C. Eggleston, of New Orleans, La., member of the International Mineral Syndicate and former lease representative for the Freeport Sulphur Company of Texas, is making a study of Michigan's possibilities for sulfur production. Michigan crude has a considerable sulfur content.



Map showing locations of deep wildcat tests in Carter and Love Counties, Oklahoma, and Cooke County, Texas

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New Problem

The oil industry, which has always prided itself upon its relations with its workers, is now threatened with a labor problem. The announced campaign for the unionization of oil industry employes is, after all, a problem for the whole industry and not for any particular unit in it.

The oil business, as everyone in it knows, is highly competitive. The cost of labor and the conditions affecting that cost are a very important factor in that competitive system.

This situation was demonstrated under the NRA when company operated service stations observing higher rates of pay, shorter hours and other restrictions were often compelled to compete with an individually owned station across the street, run by one family without any obligation on hours, wages or restrictions.

It is plainly very important, both to labor and to the industry, that any type of organization or unionization affecting the oil business (or indeed any business) be applied fairly and generally so that it may not operate unjustly or cause competitive inequality.

There is the further fact brought to attention by Mr. Lewis' remark that his interest in the unionization of the oil industry is largely because of its possible effect on the competitive coal industry. Labor costs and conditions as a factor in competition between industries demand the attention of the entire industry affected.

The oil industry is not a sweatshop industry. The hours of labor, rate of wages and working conditions are far above the average. Oil companies have led the way in providing plans for the social welfare of their employes, hospitalization, sickness and old age funds, through cooperation of employers and employes.

All fairminded industrialists recognize the benefits of collective bargaining, with the reservation that these may be obtained also through company organizations without the risk of possibly a minority under outside leadership overrunning the wishes of a majority of the actual workers affected.

Flexibility is necessary in practically all oil operations. It is for employers to decide whether this is obtainable under a closed shop, the "check-off", rigid seniority rules and all the other restrictions of 100 per cent unionism. Considering these matters separately companies may find themselves the victims of the system of playing one company against another until they all lose.

Some of the major problems with which the industry is still wrestling might have been solved more readily if tackled earlier. All the more reason, therefore, why the industry should give immediate attention to this new and pressing problem of labor relations.

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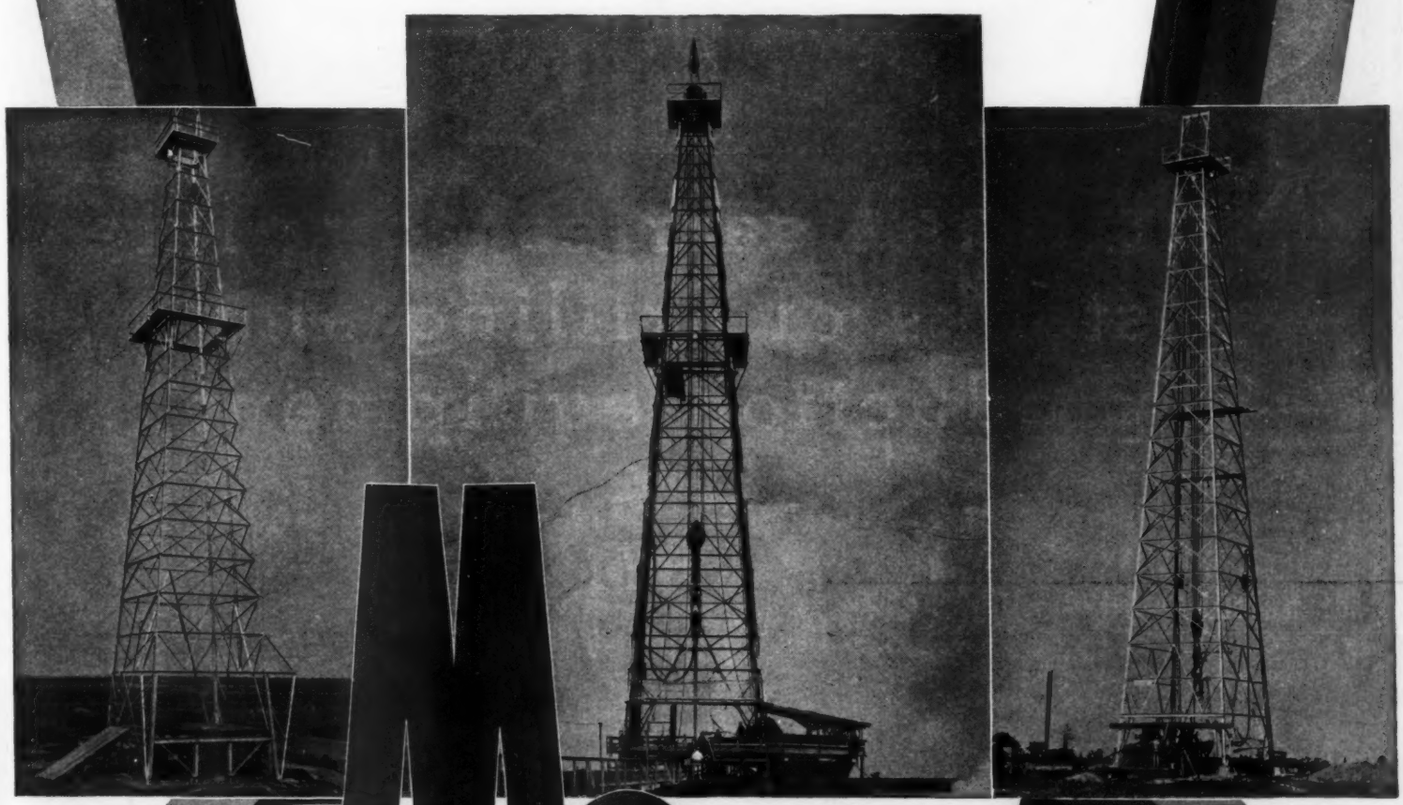

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Oil News from Foreign Lands

Barco Concession

Another failure has been abandoned on the Barco concession in Colombia recently brought under control of Texas Corp. and Socony-Vacuum Oil Co. The most recent abandonment on the Barco concession is No. 11 La Petroleo which failed to develop commercial production in drilling to around 1,200 feet. No. 12 La Petroleo, one of three locations equipped with rigs when Texas Corp. and Socony-Vacuum purchased 100 per cent of South American Gulf Oil Corp. stock thus acquiring 79 per cent interest in Colombian Petroleum Co., has been spudded and is drilling at a shallow depth. No. 13 and No. 14 La Petroleo remain rigs. On the south dome of the Barco concession, the Colombian company is drilling below 2,000 feet in No. 3 Rio de Oro, which is approximately three-quarters of a mile west of the No. 2 Rio de Oro, abandoned at about 6,300 feet.

COLOMBIA

American Exports to England

Refiners of the United States are more than holding their own in lubricating oil, kerosene and fuel oil commerce with the United Kingdom, but are slumping as a source of supply for gas oil and gasoline. Figures for the first six months of 1936 disclose that the United Kingdom is drawing heavier petroleum supplies from the British West Indies, both Netherlands and from Venezuela. Mexico is supplying more fuel oil, based on the first six months' record compared with a similar period in 1935, but has slumped appreciably in other products with exception of lubricants, which are nearly the same for both half years. A gain is shown in crude oil imports from Iran, but all refined products from that source reaching British ports reflect substantial declines compared with 1935.

UNITED KINGDOM

Rumanian shipments of gasoline, kerosene, gas oil and fuel oil all increased during the first half of 1936, the English import figures show, but the most substantial gains in all products were reported from the Netherland West Indies. Shipments from Netherland West Indies to the United Kingdom increased from 10 to 600 per cent. Trade with Russia reflected only minor fluctuations, and the only material change in Mexican trade was in gasoline, kerosene and fuel oil.

The following table shows the major sources of the United Kingdom's petroleum supplies for June, 1936 and 1935, and for the first half of the two years under comparison:

UNITED KINGDOM'S PETROLEUM SUPPLIES

(Figures in Gallons)

	June		First half	
	1936	1935	1936	1935
From U. S.:				
Gasoline ..	4,984,000	16,492,000	53,840,000	59,691,000
Kerosene ..	396,000	239,000	8,531,000	5,691,000
Lube oil ..	5,618,000	4,075,000	38,991,000	29,780,000
Gas oil	309,000	.....	1,715,000	7,930,000
Fuel oil ...	2,841,000	2,707,000	19,611,000	17,068,000
From Iran:				
Crude	29,494,000	13,408,000	55,352,000	45,486,000
Gasoline ..	15,243,000	22,879,000	111,557,000	139,589,000
Kerosene ..	4,224,000	4,156,000	29,292,000	39,895,000
Gas oil	.....	4,941,000	11,125,000	26,252,000
Fuel oil ...	9,410,000	18,154,000	39,234,000	68,562,000
From Rumania:				
Gasoline ..	6,836,000	2,575,000	50,031,000	37,669,000
Kerosene ..	3,016,000	1,445,000	18,102,000	14,422,003
Gas oil ...	5,688,000	1,626,000	29,833,000	13,818,000
Fuel oil ...	.....	4,135,000	1,251,000	11,181,000
From Iraq:				
Crude oil ..	16,360,000	16,337,000	82,152,000	76,869,000
From Netherland W. Indies:				
Crude oil ..	6,719,000	3,453,000	45,577,000	11,759,000
Gasoline ..	52,780,000	50,241,000	291,643,000	275,647,000
Kerosene ..	4,013,000	1,314,000	33,143,000	15,089,000
Gas oil	530,000	.....	6,019,000	1,145,000
Fuel oil ...	28,508,000	28,699,000	153,210,000	166,072,000
From British W. Indies:				
Gasoline ..	8,820,000	2,987,000	43,600,000	30,485,000
Fuel oil ..	2,512,000	4,764,000	9,789,000	14,512,000
From Venezuela:				
Crude oil ..	9,758,000	5,668,000	31,405,000	11,783,000
From Mexico:				
Crude oil ..	.....	7,788,000	5,591,000	58,464,000
Gasoline ..	.....	3,022,000	19,979,000	32,094,000
Kerosene ..	1,696,000	737,000	8,753,000	13,338,000
Lube Oil ..	1,346,000	.....	5,986,000	5,572,000
Fuel oil ...	12,875,000	7,118,000	62,282,000	51,026,000
From Russia:				
Gasoline ..	2,663,000	5,606,000	28,645,000	28,726,000
Kerosene ..	.....	148,000	1,733,000	2,002,000
Lube oil ..	1,695,000	1,943,000	13,264,000	8,595,000
Gas oil ...	317,000	.....	938,000	2,152,000
Fuel oil ...	2,079,000	.....	2,536,000	4,949,000
From Peru:				
Crude oil ..	7,488,000	15,272,000	36,871,000	43,620,000

Drilling in England

Capt. Harry Crookshank, M.P., British Secretary for Mines, announces that a further five prospecting licenses under the Petroleum (production) Act, 1934, and the Petroleum (production) Regulations, 1935, have been issued by the board of trade. The licenses, one of which embraces two areas, have been granted to the Anglo-American Oil Co., Ltd., and cover approximately 478 square miles in the counties of Sussex and Hampshire.

Iraq Regains Mosul Oil Fields

Iraq Petroleum Co., owned by Anglo-Iranian Oil Co., the Royal Dutch Shell, Standard of New Jersey, and Socony-Vacuum, through control of Near East Development Co., and French groups, has regained control of Mosul Oil Fields, Ltd., which, with its subsidiary, British Oil Development, Ltd., owns a concession of about 45,000 square miles from the Iraq government, last year passed into Italian hands. Iraq Petroleum Co., successor to the Turkish Petroleum Co., owns the sole rights over important oil areas east of the Tigris River.

IRAQ

The Mosul Oil Fields, Ltd., capitalized at 1,669,289 pounds, was organized four years ago as a private concern, to acquire all of the shares of the British Oil Development, which obtained a concession of about 45,000 square miles on the other side of the Tigris from the Iraq government. Certain changes in the board of Mosul Oil Fields, Ltd., gave rise to the belief that Italian interests had obtained control of the company, but this was denied by the secretary. However, Italian, German and French interests are represented on the board.

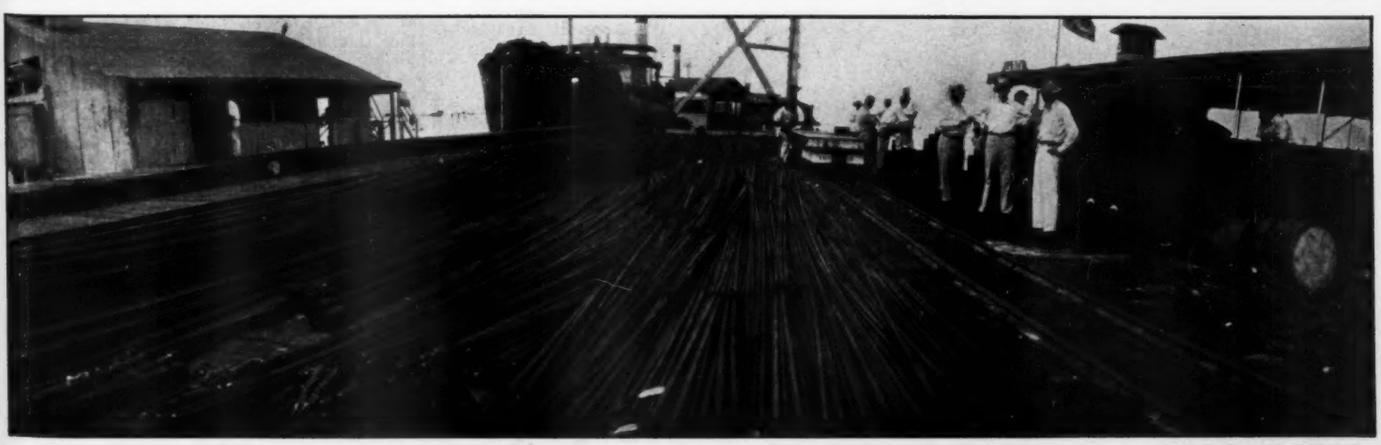
Swiss Oil Search

Exploration for oil production has been launched near Yverdon in the Canton of Vaud where favorable geological reports have been made by a few investigators. Drilling operations are being supervised by a Belgian engineer, reported from Consul General A. C. Frost's Zurich office as experienced in Mexico and Texas. Drilling has proceeded below 300 feet. Beginning next fall, permit to import gasoline and benzol for motor vehicle consumption will be made conditional upon the purchase by importers of a maximum of 6,000,000 liters of alcohol manufactured from domestic stone fruit. The alcohol is to be blended with imported gasoline and benzol. The 6,000,000 liters of alcohol, purchase of which is made mandatory on gasoline and benzol importers, represents approximately 2 per cent of the total annual domestic consumption of motor fuel in Switzerland. The requirement is to exist only for duration of Switzerland's emergency financing program up to December 31, 1937.

SWITZERLAND

Blowout in Venezuela

A gas blowout followed by fire halted drilling last week on Standard Oil Co. of Venezuela No. 1 Maturin, a wildcat prospect in Eastern Venezuela in the vicinity of the Quiriquire field. The gas, sufficient to clean the hole of drilling mud, was encountered at approximately 900 feet. Reports had not been received at the end of last week whether the fire and gas flow had been brought under control. The wildcat test is one of several drilling in the eastern part of Venezuela on lands wholly controlled or held under exploration contracts by Standard of Venezuela.



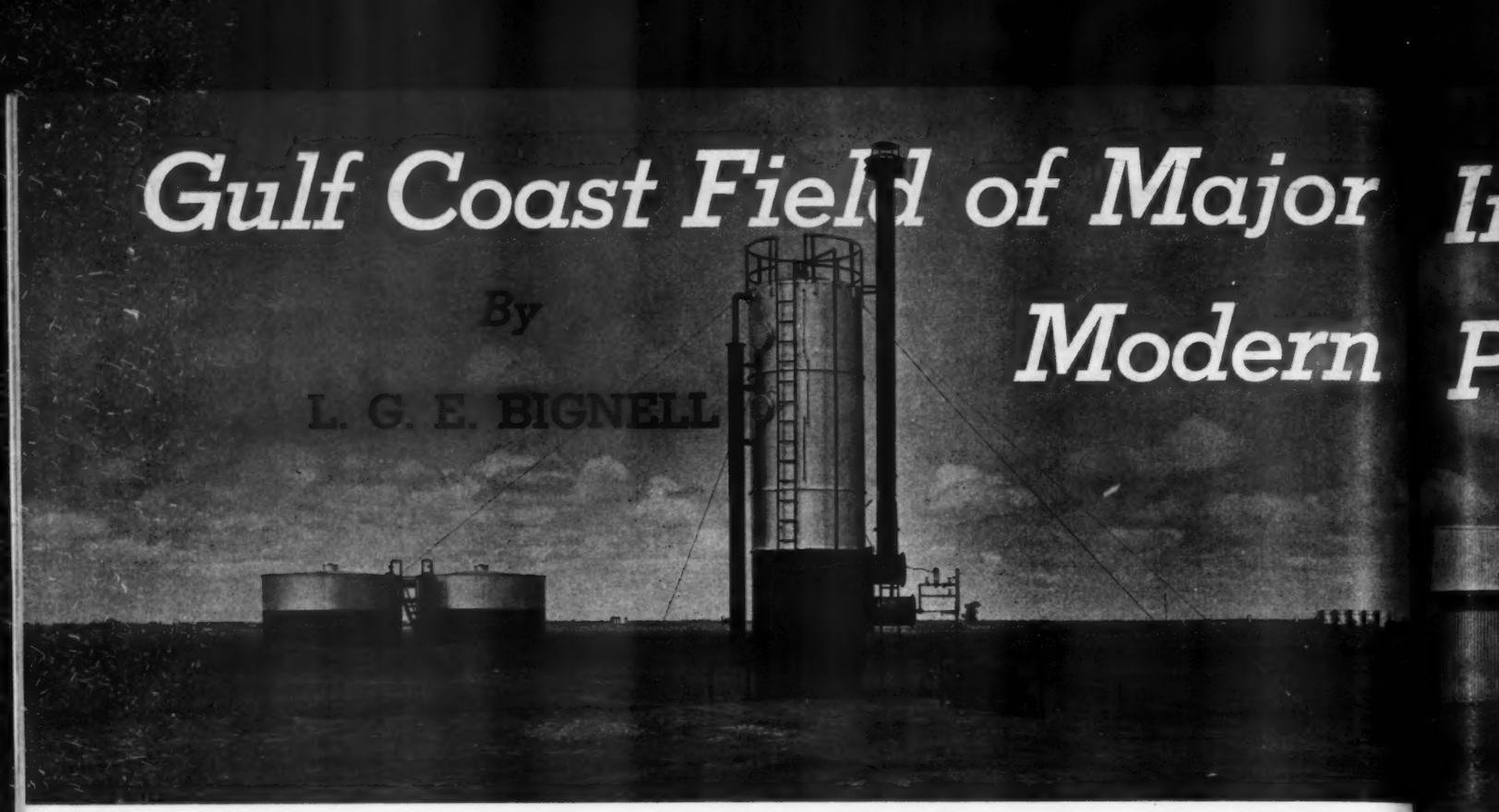
—C. C. McDermott, Maracaibo.

Venezuela Gulf Company pier at Cabimas, with consignment of 200,000 feet of sucker rods from the "States"

Gulf Coast Field of Major I... Modern P...

By

L. G. E. BIGNELL



Central system for treating and recovering oil in tank bottoms accumulated from bringing in wells through separators prior to their cleaning up

The conservation of gas, oil and reservoir energy is being practiced as an economic measure by one major oil company operating on the Gulf Coast of Texas. Means have been provided for eliminating the usual waste of oil accompanying the bringing in of a well. Wells on production have very low gas-oil ratios. Bottom-hole pressures decline very little while the wells are produced, because of precautions taken in completing the wells. Modern methods of exploring for and drilling into the oil sands are followed, and when the oil and gas is found, only modern engineering practice is applied to the production.

The Skelly Oil Co. of Tulsa has developed about 1,200 acres of productive Frio sand in the Bay City field, about 6 miles north of the city of that name in Matagorda County, Texas. The structure was originally outlined by the Atlatl Royalty Corp., of which E. DeGolyer is president, by the use of geophysical methods. The Skelly Oil Co. owns approximately seven-eighths interest in most of the acreage. This arrangement permits the operating company to carry on development in a uniform manner and the results so far attained by the completion of 13 wells has been very satisfactory.

The producing sands in the Frio formation are found at approximately 7,000, 7,500, 7,700, 7,900 and 8,200 feet. The first well, No. 1 Cobb, was located practically on the apex of the structure and found oil at 7,000 feet, but had a high gas-oil ratio. A second well was drilled with like results, and it was then determined that the formations were lying rather flat. The third well was located a distance of 2,250 feet north from the first well, and after penetrating the 7,000-foot sand was drilled to a total depth of 8,708 feet, and in so doing the five pays enumerated above were penetrated. It is estimated there is still 1,300 feet of Frio formation blow the bottom of this hole.

The first well was started December 28, 1933, and completed March 18, 1934. As it and the second well, also completed in the 7,000-foot sand, each had high gas-oil ratios, the operators not wanting to unnecessarily dissipate the formation energy kept these wells shut in for a period of nine months before the third well was started in May, 1935. Since then 11 wells have been completed and three are now drilling.

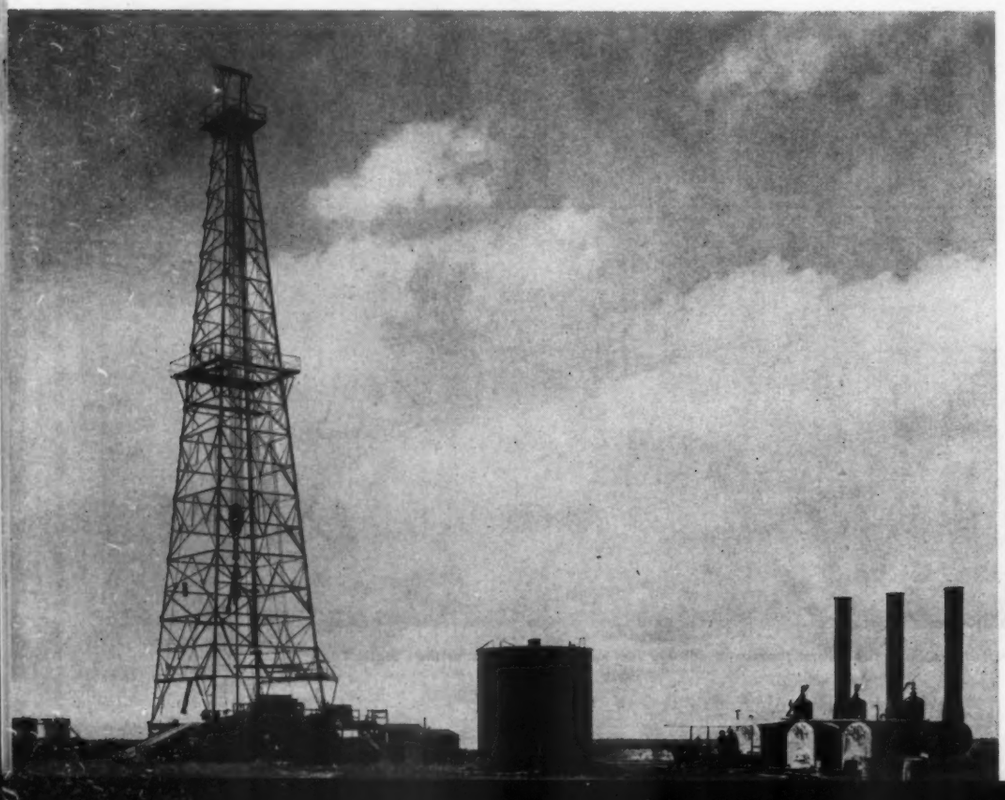
With the drilling of No. 3 Cobb, located down the dip from No. 1 Cobb, a string of 9-inch casing was set through the 7,000-foot sand. The hole was then reduced and cored ahead, locating the pay stratas at 7,500, 7,700, 7,900 and 8,200 feet.

After making this test, the well was plugged back to 8,300 feet and a string of 6⅝-inch casing run and cemented at that point, with sufficient cement to protect the producing horizons above. The gun perforator was then used to puncture the casing opposite the lower portion of the 8,200-foot pay sand. After perforating the lower 5 feet of this section, a drill-stem test was made which indicated an abundance of oil, but the lower six stands, or 540 feet, of drill stem filled with salt water. Since in drilling and coring this 8,200-foot sand no water was found, the operators were at a loss to know the source of this water. It was necessary to exclude this water, whatever the source, and this was accomplished by a cement "squeeze" job. The cement was forced through the gun perforations under as much as 4,000 pounds pump pressure. Bottom-hole pressure was found to be 3,650 pounds per square inch, and it took this high pump pressure to force the cement behind the casing.

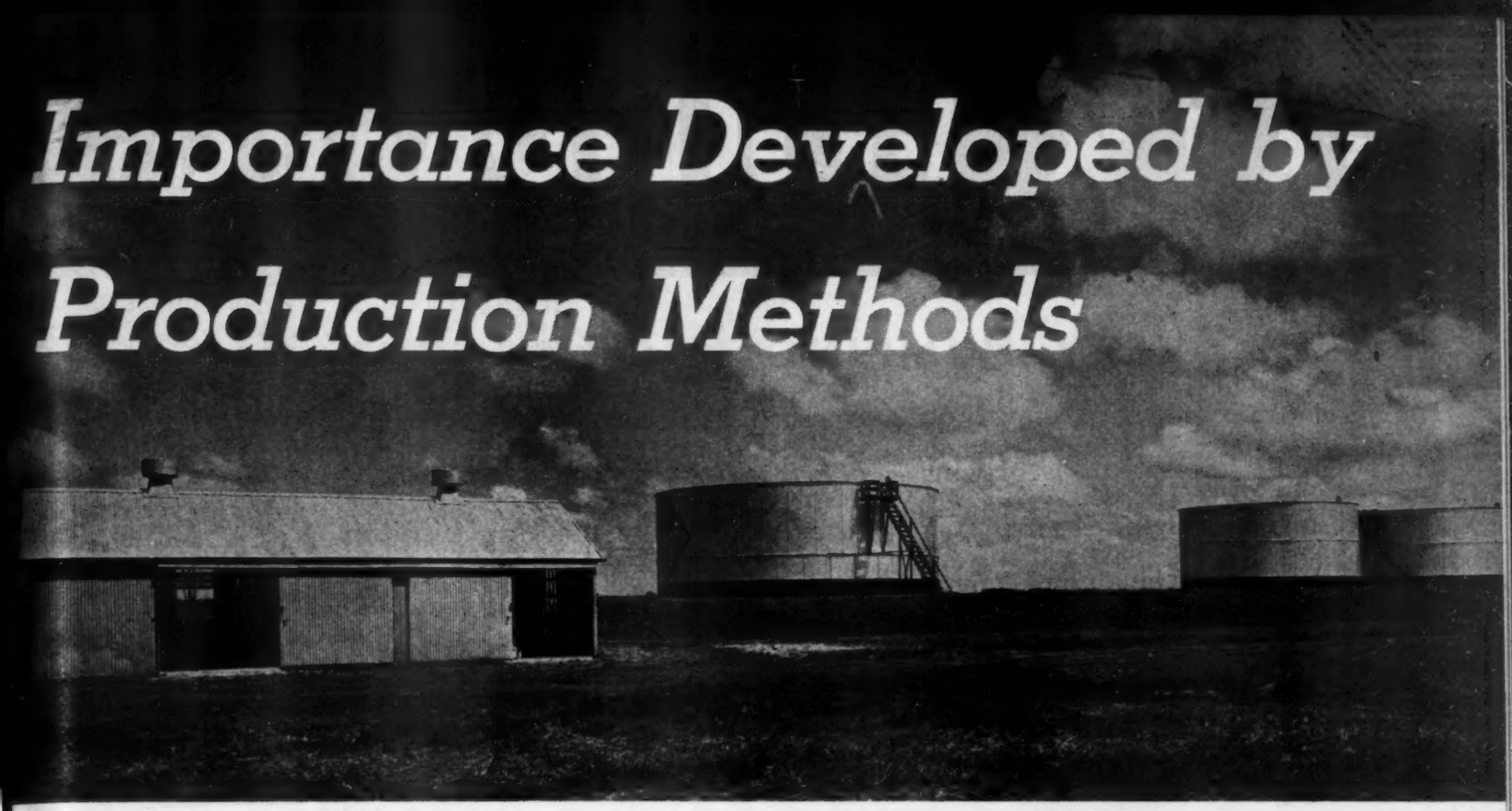
After completing this first "squeeze" job, the casing was again gun perforated five different times. Each perforation was from 3 to 5 feet above the one next below, but after each drill-stem test salt water continued to show in from five to six stands of the pipe.

After five attempts to bring in this well as a producer free of water from the 8,200-foot sand had failed, it was thought the water might be coming from an upper formation. It was known that there was salt water beneath the oil in each of the other several pay horizons in this field. This fact had been established by study of cores and checked by electric coring.

Typical Gulf Coast drilling well. Note 500-bbl. water tank mounted on skids, with old rotary hose used as a flexible connection to the boiler feed pumps



Importance Developed by Production Methods



Central gathering and pump station consisting partly of one 10,000- and two 5,500-bbl. storage and work tanks

Believing the cement was either not present, or improperly set at some point behind the casing above 8,200 feet, it was decided to try the Schlumberger temperature method for determining the condition of the cement behind the casing. It is a well-known fact that as cement sets it generates heat. This heat so developed will be measurable, it is thought, for a period of at least 60 days after the cement has been run into the well. While the method was relatively new when the Skelly production men decided to try it, the results were rather startling, for it was found that instead of a normal straight-line temperature gradient increasing with depth, the temperature was definitely lower than expected between 7,900 and 7,960 feet. This was interpreted as definitely indicating that cement was missing from behind that section of the casing, or that it had not properly set. It was then decided to perforate between 7,940 and 7,960 feet and force cement behind the casing. After 63 sacks of cement had been placed at this point the temperature was again taken and a straight line temperature gradient resulted. The temperature in this hole varied from 160° F. at 7,000 feet to 192° F. at 8,200 feet, or averages about 1° rise for each 37 feet of depth.

Central water station operated by gas lift. Depth of well 800 feet

Having completed the "squeeze" job, the gun perforator was again run and 3 feet of casing perforated with 12 shots in the middle of the 38-foot section of sand just below 8,200 feet. A drill-stem test was made and an excellent oil well with low gas-oil ratio was indicated with no show of water.

The casing programs for these wells consists of running about 1,400 feet of 13⅜-inch surface casing which is cemented from top to bottom. Out of the bottom of this string an 11¼-inch hole is drilled and a string of 7⅝-inch casing set through the 7,500-foot sand and cemented with about 600 sacks. This large string of casing will permit the later setting of a string of 5½-inch casing when the holes are deepened to take in the lower producing formations.

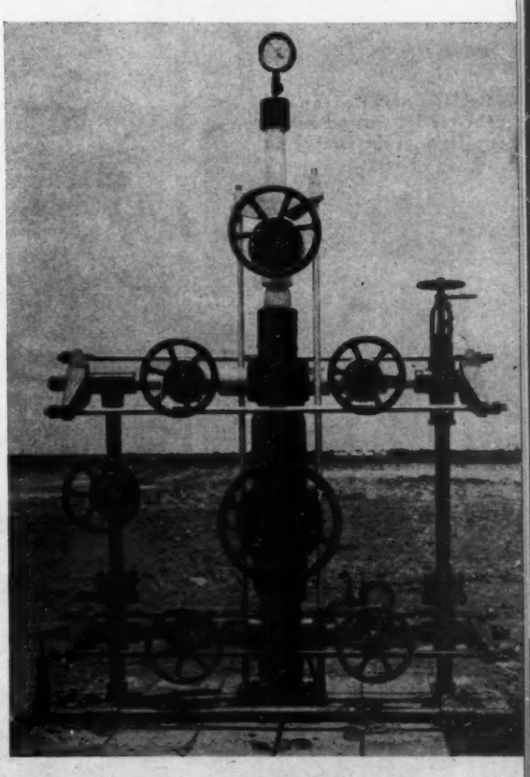
After drilling is completed, the hole is full of mud. A string of 2½-inch upset tubing is then run to near the bottom of the hole and clear water circulated to wash the mud out of the casing. When all of the mud fluid has been removed and only clear water remains in the hole, the wells will begin to flow and the gas and oil will force the clear water out of the casing. During the flow period when the water is being removed, the well is produced through one-quarter inch choke on the casing. As soon as oil begins to appear at the surface, the flow is switched to the 2½-inch tubing, but a quarter-inch choke is still used.

It has been found when producing these wells through one-quarter inch choke they will make from 675 to 934 bbls. of clean oil per day. The gas-oil ratio ranges from 350 to 700 feet of gas per barrel of oil. Under a recent test it was found that the shut-in bottom-hole formation pressure was about 3,650 pounds per square inch in No. 3 Cobb, producing from the 8,200-foot sand. When this well is produced through a one-quarter inch choke at the rate of 934 bbls. per day with gas-oil ratio of 487 feet, there is a drop in formation pressure of only 6 pounds, or the flowing pressure in the formation is 3,644 pounds per square inch. This slight drop in pressure is thought to indicate favorable permeability, saturation and porosity of the producing sand, and undoubtedly indicates also a long flowing life for these wells.

Effective conservation in producing the gas and oil is by no means the only accomplishment of the Skelly Oil Co. on this property, for oil is reclaimed during the drilling-in period and no gas is wasted during production. Even after the well begins to produce oil, it has been found slugs of mud will be produced from time to time, and instead of turning this mud and oil into the slush pit, it is run directly through the separator and into the lease tanks. After settling, the tank bottoms are run through a separate 2-inch gathering line and delivered to a treating plant consisting of two 250-bbl. tanks and an enclosed, automatic-type treater. This reclaims the good oil and sends the mud to waste. This oil is delivered to the central tank battery, where it is handled along with the normal production from the wells. In this manner the usual waste of oil, inevitable when wells are completed or cleaned into open pits, is entirely avoided.

Some oil is delivered to a small refinery near the lease. This refinery's capacity is about 800 bbls. per day, and as each well produces 150 bbls. per day, the balance of the oil is stored in one

Typical well-head connection for completed oil well in the Bay City field



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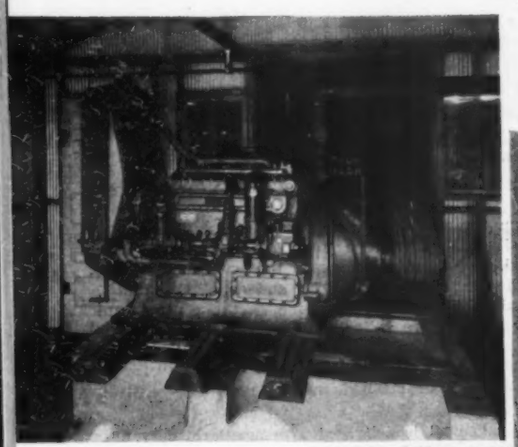

ABOVE: Showing Drive End of 24LT-112CH Geared Pumping Unit.

RIGHT: Installation of 24LT-112CH Geared Pumping Unif (Twin Crank) in Kansas.

LEFT: Pit setting of 125 CGP Geared Power in East Texas.

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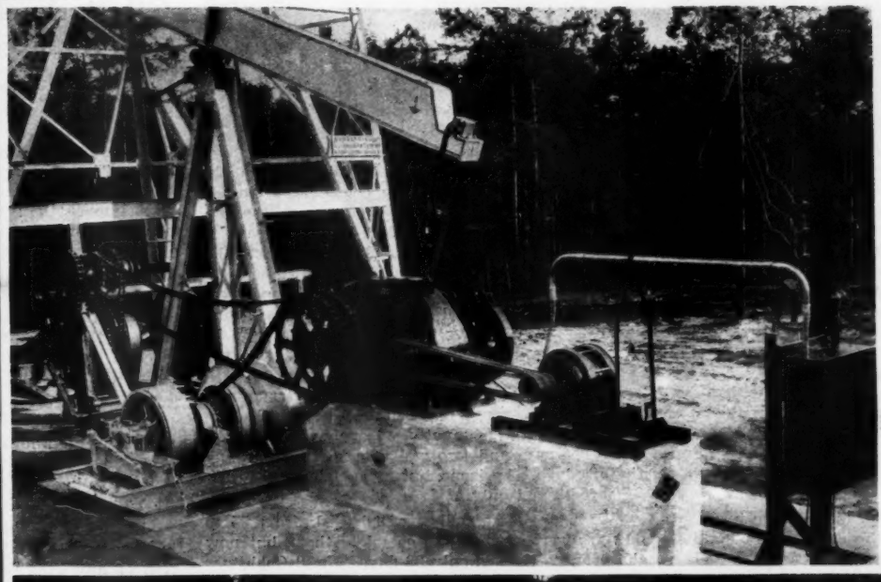
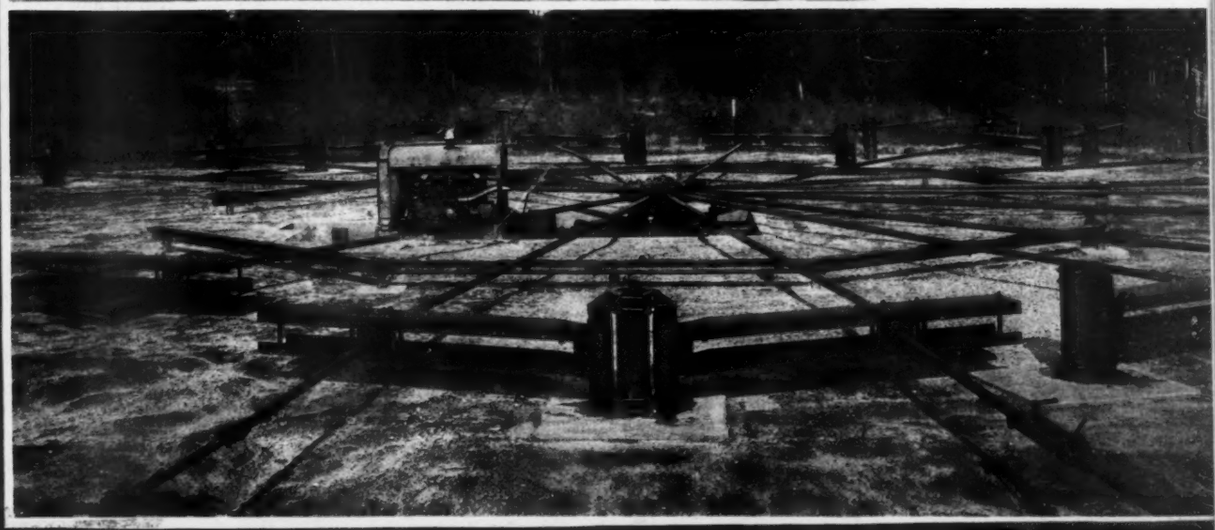
ABOVE: 12JT-60 CD Geared Pumping Unit. Twin Crank.



LEFT: Installation of 11 MDS Stationary Pumping Unit in East Texas.

BELOW: Installation showing 125 CGP Geared Power in East Texas driven by N4B Climax Engine.



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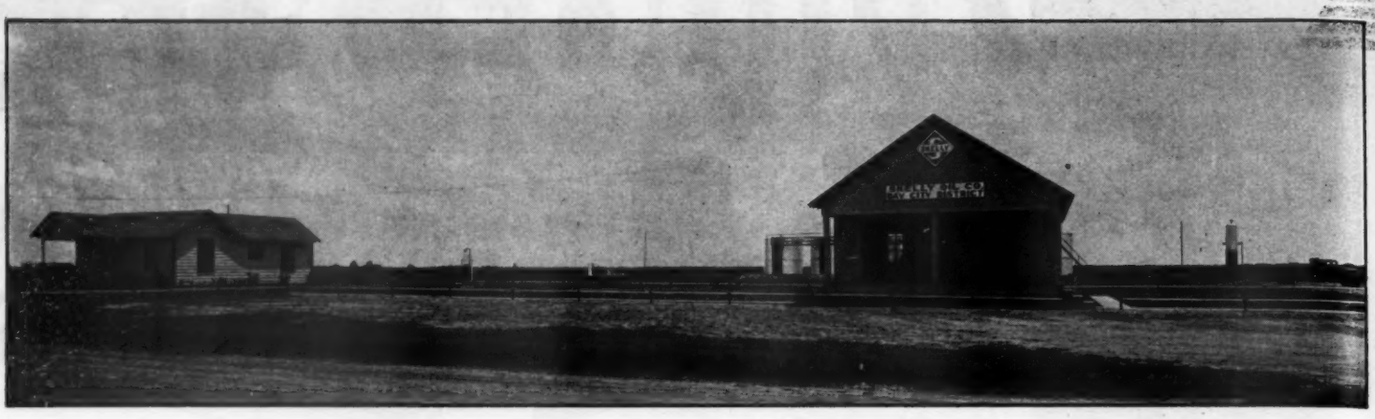


Skelly Oil Company's office and one house "camp" in the Bay City district

10,000- and two 5,500-bbl. bolted steel tanks. When 15,000 or 20,000 bbls. of oil have been accumulated, it is pumped into the 6-inch trunk line of the Texas Pipe Line Co., about 2½ miles south of the property, and delivered by that company to tidewater points for transportation by tanker to final destination.

To gather the oil at the central battery in this very flat country, it has been necessary to lay the 6- and 4-inch laterals of the oil-gathering system with the lower end about 8 feet below the pipeline connection on the lease tanks. This is accomplished by digging a ditch with a sloping bottom and discharging the oil into the suction of a pump which lifts it into the 10,000- or 5,500-bbl. tanks.

At the central tank battery, a steel building has been erected for housing the central pump station for gathering and pumping out the oil. The station consists of one suction and one discharge pump. The suction pump is equipped with a 35-horsepower engine and the line pump with a 90-horsepower engine. The suction pump will handle about 450 bbls. of oil per hour into the station and the pipe line pump about 350 bbls. per hour away from the property.

A 10-kilowatt light plant has also been installed to furnish electricity for the camp, pump station and for floodlights for the tank farm.

While the gas-oil ratio is very low, none of the gas is wasted, for it is delivered into a 4-inch gas pipe-line fuel system and transported to the drilling wells. To make up for any deficiency in gas volume for the boilers, gas is taken from No. 2 Cobb, the one well that has never been deepened below the 7,000-foot pay. At this well a gas regulator is set working against well pressure on one side and 150 pounds line pressure on the other, and in this way gas is taken from the well as needed at the boilers, but none is produced if sufficient gas can be obtained from the other low-ratio oil wells.

Another minor purpose to which this gas is put is to use about 75,000 feet per day to gas lift water from a well drilled to a very good water sand at about 800 feet depth. This well provides sufficient water to operate five rotary outfits and still leaves ample for domestic purposes. The water is delivered into a 500-bbl. steel tank at the well by the gas-lift system and distributed to the drilling wells through a 4-inch pipe-line system by means of a direct-connected, motor-driven centrifugal pump working against 150 pounds pressure.

When the first wells were drilled, it was common practice to dig a water pit for storage of water at each drilling well. These pits cost $80 to dig and $35 to fill. To eliminate this expense, a 500-bbl. bolted steel tank is erected upon a skid, and this tank, or as many as needed for the drilling well, is towed to the rig by tractor and left there while the well is being drilled. As this field is in a flat, wet country where rains are frequent, it was found that pipe connections between the tank and the boiler feed pump broke when the skid sunk into the mud. To overcome this difficulty, old rotary hose is now used between tank and suction of feed pump.

These sudden, and often almost continuous, rains have caused other problems. Handling cement at the well was one which has been solved by the use of a portable steel house large enough to take care of all of the cement needed for a job—from 1,000 to 1,500 sacks. It is estimated this house has already paid for itself by eliminating the loss formerly caused by wetting the cement during sudden thunder showers.

Roads have been graded to all wells on the lease, and this work is done considerably in advance of the making of new locations so the surface may become packed before it is necessary to start hauling. While the country is practically level, it has been found this kind of road without hard surface serves the needs of the operators nicely. It is proposed to connect the field and Bay City with a concrete highway in the near future, and for this reason no large lease camp has been built, as the employes live in town.

Up to August 1, 13 wells have been completed on the Skelly property. Ten of these wells produce from the 7,500-foot pay, one well from the 7,000-foot pay, and two wells have penetrated all five producing horizons, but were completed in the 8,200-foot sand only.

When the first wells were drilled, from 55 to 60 days were required to complete them, but now the average time is only 38 days. No. 8 Cobb was drilled in 28 days, and 30 cores were taken between 7,000 and 7,500 feet. The string of 7⅝-inch casing was set and cemented through the 7,500-foot sand within this time limit.

Coring is practiced consistently in drilling these wells, and a paleontologist is at the well all the time to check cores, using a field laboratory to facilitate analysis and tests of cores for saturation. These wells have the benefit of the driller's log, log made by the geologist and an electric log taken before the casing is run.

On No. 3 Cobb, which is the exploratory well, drilled to a total depth of 8,708 feet, 289 cores were taken, using the drill-pipe type of core barrel, which is run and recovered on a wire line. The average formation recovery per core is about 75 per cent.

The holes are checked frequently to determine verticality, and the maximum deflection from vertical thus far has been 1½ degrees.

A retractable type christmas tree is used on all wells, which is tested up to 5,000 pounds pressure. Two outlets are provided on the casing equipped with positive chokes, and two outlets on the tubing with one positive choke and one adjustable choke. The tree is equipped with a retractor head so the master gate valve can be operated as needed without withdrawing the tubing.

There are still many locations to be drilled on Skelly's property, and it seems probable they will all be productive from the five pays in the Frio formation. This drilling and producing work has been directed by Harold Decker, superintendent. It is planned to continue the plan for drilling the hole through all pay sections and setting and cementing the pipe and then perforating the casing from the bottom pay upward in successive steps to insure complete control of production rate and gas-oil ratio.

Oil Workers Union Starts Drive for Increase in Membership

(Continued from Page 22)

Maximum weekly working hours shall not exceed 40, but shall not exceed 72 hours for any two-week period, except in case of accident or an act of God. Daily work hours shall not exceed 8, unless due to an accident, but if an employe works more than 8 hours in any day his hours for the next day shall be reduced so as not to total more than 16 in any two days.

Provision is made for the establishment of a "check-off" with the provision that the employer, Consolidated Oil Corp., shall deduct the dues payable to the union from the pay envelopes of employes.

In all agreements the union is attempting to get the checkoff system included, time and one-half for overtime, to limit weekly hours to 36 with a small allowance for accidents and acts of God providing for payment at time and one-half, but providing for the equalization of such overtime within a limited period, usually two weeks.

In the Consolidated Oil agreement great power is vested in H. F. Sinclair in the final determination of any grievances which may be brought up to him, but this one man rule is generally dodged by the union if possible. It is usually left to the so-called "workmen's committee" to decide whether decisions are just and acceptable to the employes generally. Hourly provisions are usually that the maximum hours per week shall not be more than 40, nor more than 72 for any two-week period, nor more than 16 in any two days. Any change in these hours is reserved for discussion between the employes committee and the company management. It is a uniform provision in all employer-employe agreements entered into with the union that there shall be no strikes nor lockouts under the terms of the agreements.

Valve Was Not Injured

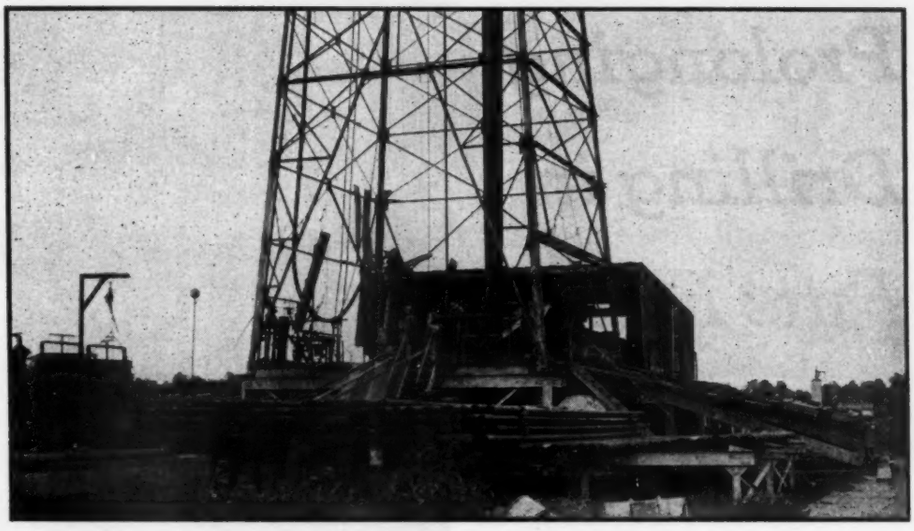
In the article entitled "Special Equipment Is Used to Control High-Pressure Wells in Moore Pool" on page 48 of the August 13 issue of The Oil and Gas Journal reference was made to certain valves needing repair before the well could again be put on production.

Subsequent check develops the fact that it is common practice to examine valves to make certain they have suffered no material damage while potential tests were being taken. In this instance the Orbit valve was examined before the well was again put on production and found to be uninjured.

Professor W. L. Badger, of the University of Michigan, has been placed in charge of a new consulting engineering division of the Dow Chemical Company, of Midland, Mich., at Ann Arbor, Mich. The branch is designed to give practical engineering service to present and prospective users of Dow products, it was announced.

Casing of Deflected Hole Completed on Coastal Wildcat

By NEIL WILLIAMS



Pulling tubing in Gulf Oil Corp.'s No. 1 Fairfield, Lockridge area, Texas Gulf Coast. The rig is the same one which drilled the world's deepest test in Upton County, Texas

An unusual and difficult job of running and cementing casing in a deflected hole was accomplished recently by the Gulf Oil Corp. in a deep wildcat test in the Lockridge area of Brazoria County, Texas Gulf Coast. The job involved the exertion of special precaution to prevent the pipe from sticking before getting it down, and to insure placing of the cement.

The hole is one in which the degree of deviation is so great that the pipe necessarily rested partially on one side of the wall of the hole while being run. This, coupled with the depth and comparatively small size of the hole, presented problems not experienced before to such an extent in running casing on the Gulf Coast.

Depth of the hole is 8,689 feet where it was drilled with 6¼-inch bit after having kicked out the old hole at 6,265 feet. From the latter point, which is practically vertical with the surface location, the bottom of the deviated hole is 37 degrees off vertical being located at a point approximately 775 feet from the original location.

Into this hole, a full string of 5-inch casing was run. It was landed at 8,658 feet 11 inches, and cemented with 200 sacks of cement. In the cementing, circulation was broken after 1,800 pounds pressure had been built up by the pumps; then, circulating pressure of 1,200 pounds was maintained.

Because of the exceptionally high bottom-hole temperature of 206 degrees which might cause commonly used cements to set before being placed, the newly developed slow set cement was used. The material provided for this job had an initial set of four hours at 180 degrees, which gave ample time for getting all the cement in the hole.

In this well, No. 1 Fairfield, 7-inch casing previously had been set and cemented at 6,259 feet, where it was run for a test of a sand with a total depth at that time of 6,277 feet. When production in the test turned out largely gas, the well was killed, the screen pulled, and the hole deepened to 8,398 feet, where the well tried to blow out, sticking the drill pipe.

After backing off the drill pipe to one joint below the bottom of the 7-inch casing, the old hole was cemented back to the top of the fish, and the new hole was drilled from that level. Some trouble was experienced in kicking off from the old hole. Between the top of the fish and the bottom of the 7-inch casing was an interval of less than 30 feet, and, with this being in sand, the job was further complicated. The first attempt to take off failed when the bit started to follow the plug down the hole. However, on the second attempt a directional drilling company with specialized tools was called in, and the kick off was effected. For this attempt, the hole had been plugged back again leaving 10 feet in which to kick out.

Although it was easily possible to straighten the hole, in view of the fact that the bottom is adequately within property lines, straightening was not considered essential.

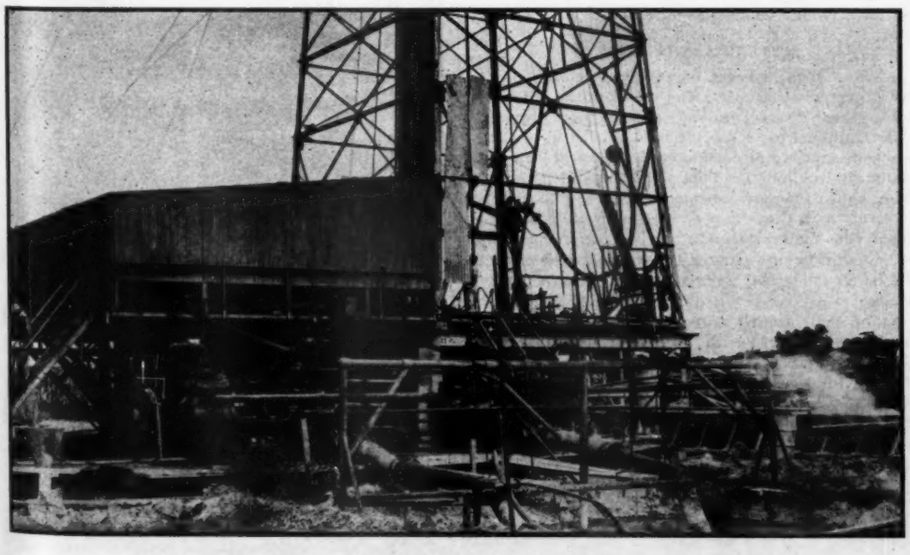
The casing string is made up of approximately 2,400 feet of 5-inch flush joint pipe run in on regular 5-inch casing. The flush joint casing, which takes in that portion of the hole below the 7-inch pipe, was provided to avoid the use of collars, which would tend to drag the wall of the hole and result in scooping up the formation ahead of the collars. Elimination of the collars also gave a greater clearance, which in view of the comparative smallness of the hole, facilitated running the pipe.

Another factor involved in the job was to keep the pipe moving as continuously as possible after starting in the hole. With the pipe riding one side of the hole the weight would cause the wearing of a groove in which the pipe may have become so embedded that it could not have been dislodged if permitted to rest too long in one place. In the procedure which was followed, stops for making connections of successive joints of pipe were reduced to a minimum. At the same time the job was carried out with such precision and order that the time required for making necessary connections was held to a maximum of three minutes for a single connection.

The pipe was run in by single joints in the conventional way to the bottom of the 7-inch casing, which was just above where the new hole was whipped out. The remainder of the pipe, however, was made up in thribbles, all of which were stacked in the derrick ready for running. Also, the cement plug container, with the cement plug already in place, the hanger and the landing nipple were made up in readiness for use. With the pipe in thribbles, only a third of the usual number of connections had to be made. Time for making connections was reduced by having all the pipe in the derrick, and while each successive thribble was being picked up by the elevator, the previous thribble in the hole was being filled with mud. By the time the last thribble was in the hole and the cement plug container, hanger and landing nipple in place, the cementing truck was in readiness, and only one flange connection was necessary to start pumping cement.

Even during the short time the movement of the pipe was stopped for making connections, the pipe showed a tendency to stick. On several occasions as much as 15 points were pulled on the indicator in lifting the pipe to free it and let it down. However, the job was completed without disaster or serious trouble.

The rig and derrick used to drill this well are the ones used on the company's No. 103 McElroy, Upton County, Texas, the world's deepest test. When the West Texas hole was abandoned the complete assembly was moved to the Lockridge prospect. Several sands were encountered in drilling the present well, and with casing run and cemented these will be tested in ascending order by the gun-perforation method.



Mud pumps and portion of circulating system of Gulf Oil Corp.'s No. 1 Fairfield

TWINNING OPERATIONS

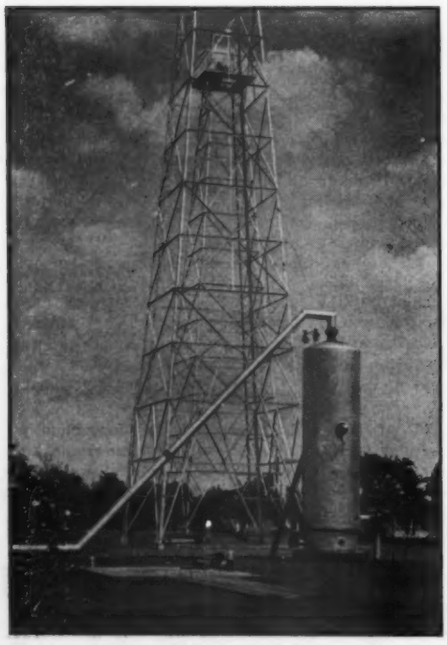
Prolonging Drilling in Fitts Field

By T. P. SANDERS

View of tank battery in Fitts pool. All wells on the lease producing from the Hunton formation flow through one separator while the other separator is used only for the Upper Simpson wells. Sealed-off sections of the battery keep the oil from the two separators from being mixed

Twin wells have been completed on 44 locations in the Fitts field, and four other locations are now occupied by triplet wells, all of which are producing oil. Of the 63 holes now being drilled in the pool, 40 are on locations on which wells have already been completed. There are 30 locations where rigging-up is in progress preparatory to drilling, and 12 of these operations will result in twin wells. When the present drilling campaign comes to a close, few locations in the eastern half of the field will be found on which only one well has been drilled.

The extensive twinning operations have arisen in the Fitts field because of the fact that there are several highly productive horizons which have been declared separate sources of supply by the Oklahoma State Conservation Department through orders of the Corporation Commission. Each well is permitted to produce oil from only one source of supply. Since each source of supply will produce oil for many years before depletion makes it advisable to plug back or deepen wells to another productive horizon, twin and triplet wells are necessary for fully developing the field at this time. Even on locations where two wells have been drilled, it is often the case that productive shallow sands have been cased off in both wells and will not be developed until one of the wells has reached its economic production limit in the horizon in which it was originally completed.



View of three wells completed on one location on E. H. Moore's Wirick lease. The two wells in line in the background are equipped with derricks, while well in the foreground is not

The four sets of triplet wells in the Fitts field are Deep Rock Oil Co. Nos. 3, 5 and 6 Harden, Crosbie and Moran Nos. 1, 1-A and 1-B D. Harden, Blackstock Oil Co. Nos. 1, 1-A and 1-B Moody, and E. H. Moore Nos. 1, 1-A and 1-B Wirick. Except for the Moore well these triplets each consist of one Gilcrease producer, one Hunton producer, and one Upper Simpson producer. The Gilcrease wells are about 1,900 feet deep and produce from 20 to 30 bbls. of oil per day with a large volume of gas. Moore No. 1 Wirick is a combination Hunton and Gilcrease well. A packer is set between the Gilcrease and Hunton, so that oil from the Hunton is produced through the tubing while gas is produced from the Gilcrease through the casing. The other two wells on this location include an Upper Simpson producer and a Wilcox producer.

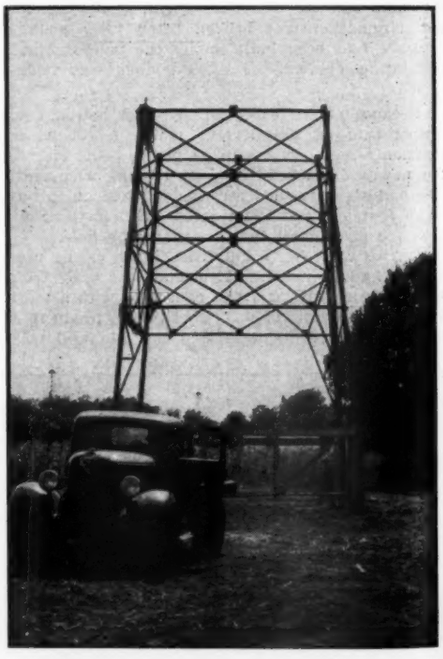
The twin and triplet wells in the Fitts field are commonly drilled from 50 to 80 feet apart. Due to the large amount of drilling which has been carried on, and is still being carried on, within a comparatively small area, derricks have often been skidded from a completed well to a new location.

SEVERAL SANDS PRESENT

The several sources of supply in this pool are all prorated differently. The oil from the Gilcrease and other Pennsylvanian sands is not prorated. The Hunton lime reservoir is classified as a Class D pool, and wells completed in it receive a flat daily allowable of 100 bbls., regardless of potential. The Upper Simpson formations are classed collectively as a Class C pool, so that wells producing from the Viola, Bromide, or McLish formations, or from all or any part of this section, are allowed 6.4 per cent of their 24-hour tubing potential daily. Wilcox wells receive a daily allowable of 4.2 per cent of their tubing potential. The potentials on both Upper Simpson and Wilcox wells are established by six-hour tubing flow tests, the total production for the last four hours being multiplied by six to determine the 24-hour tubing potential.

The production allowed from any one source of supply can only be produced from wells completed in that section. In order to enforce this ruling the oil from each source of supply is kept separated from oil produced from other sections until it is sold to the pipe line company. One separator is ordinarily used for all wells on a lease producing from a common reservoir, and a section of the tank battery is sealed off by the representative of the Corporation Commission so that it can only be used for the discharge from the one separator.

The productive strata making up the Fitts pool has been divided for proration purposes into three separate reservoirs. This division does not include the sands of the Pennsylvanian section, such as the Gilcrease, which are locally productive in parts of the field. The Hunton lime formation is the first of the three main sources of supply, and lies at a depth of about 3,400 feet. The Hunton formation is separated from the Ordovician strata by the Sylvan shale. The two lower sources of supply are both Ordovician. The upper division is made up of the Viola lime formation, Bromide formation, and Upper McLish limestone and sand; a section



Skidding a drilling derrick from a completed well to a new location. Part of the derrick is taken down to avoid danger of having it tip over

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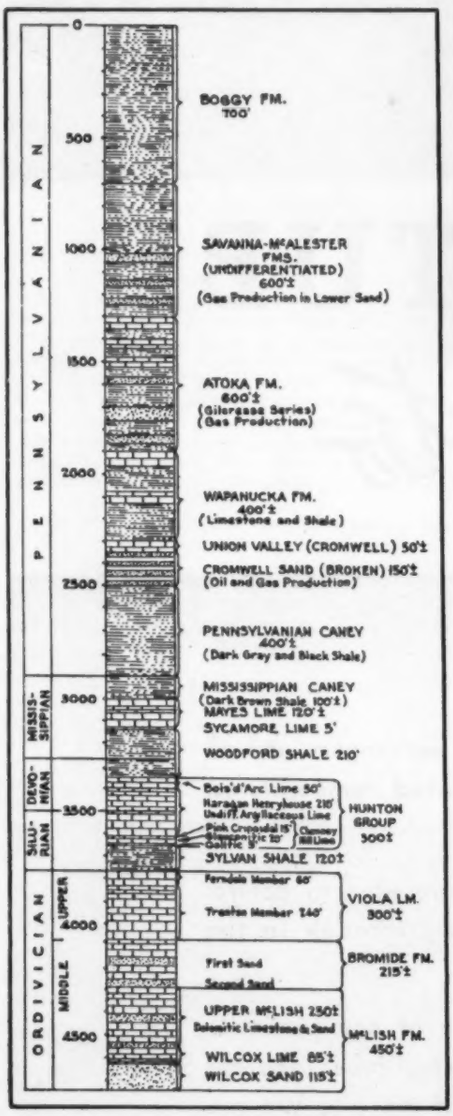
from 500 to 750 feet thick. The lower reservoir is made up of the Wilcox, or Burgen, sand and the productive portion of the overlying Wilcox lime. Of the 421 oil wells in the Fitts field, 337 are producing from the Upper Simpson section, 50 from the Hunton lime, 16 from the Wilcox sand, and 18 from the shallow Pennsylvanian sands. Fifteen of the 18 shallow wells make up what is known as the North Fitts pool. The Hunton lime reservoir is the object of most of the present drilling. Thirty-two of the wells now being drilled will be completed as Hunton producers.

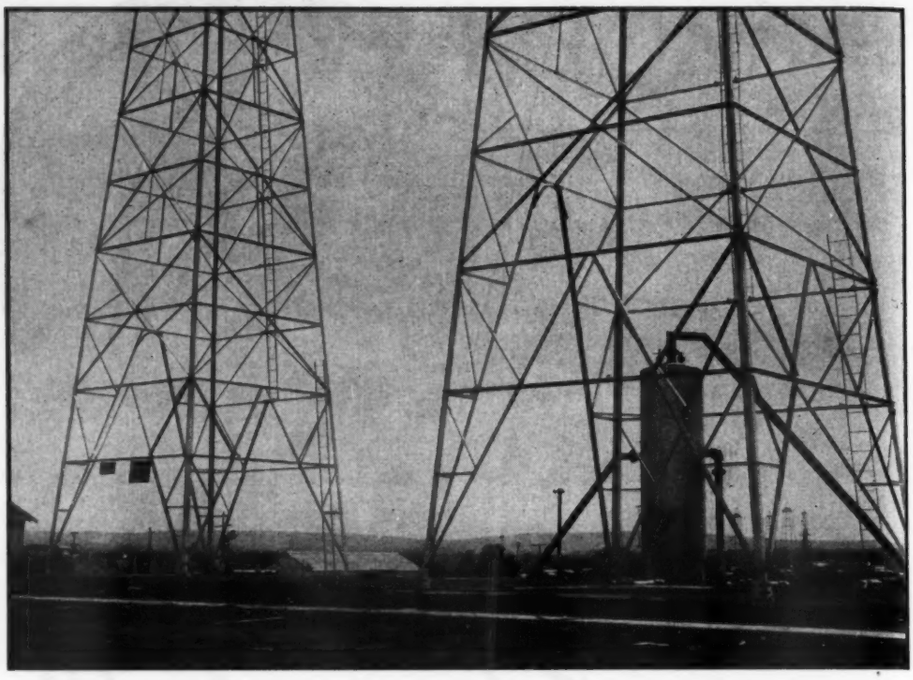
The Hunton lime is most productive in the northeastern portion of the field. This is because



Generalized section of Fitts pool

the Hunton formation thickens to the north and east, and all of the thickening takes place in the Bois d'Arc lime, which is the top member and the productive portion of the formation. Thus, in the southwestern part of the field the saturated zone of the Hunton formation is often as little as 15 feet in thickness, while it is as much as 90 feet thick in the northeastern portion of the field. where the productive member is thick, the Hunton wells are sometimes more prolific than the twinned Upper Simpson wells on the same location. The largest Hunton producer is the Samedan Oil Co. No. 2-A Holkum, which made 1,249 bbls. in six hours through 2½-inch tubing.

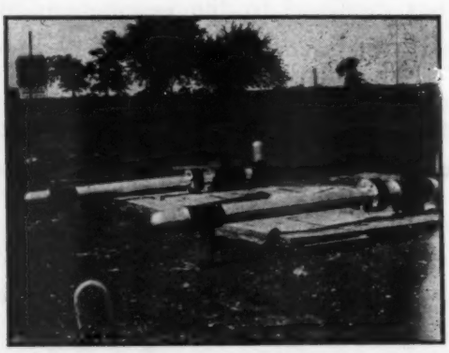
The Upper Simpson reservoir was the original productive zone developed in the Fitts pool. In the early life of the field all wells were drilled in with heavy mud, so that little was learned of the productive possibilities of the formations above the



Typical twin wells in the Fitts pool. One is producing from the Wilcox sand; the other from the Upper Simpson formations

Viola lime, or of the relative productivity of the Upper Simpson sands drilled. Since good wells were completed in the Viola lime and Bromide sands, drilling was not continued to the McLish formation until April, 1935, when E. H. Moore No. 1 Mitchell was drilled 305 feet into the McLish with a pressure drilling rig. Production increased from 37 to 462 bbls. per hour. Since that time many Upper Simpson wells have been deepened to the McLish, or drilled into the McLish at the time of their completion. However, there still remains a large number of Upper Simpson wells in which the McLish has not been penetrated, especially in the western part of the field. Even where the entire Upper Simpson section is drilled, the hole is left open through all the productive strata. Apparently this uncased hole will not present a problem, since operators have not had to concern themselves with caving trouble.

Wilcox production is found only in a small area in the south-central portion of the field, where the structural high of the field is found. This area is in the adjoining corners of sections 29, 30, 31 and 32 in Township 2n, Range 7e. The water level in the Wilcox sand is at about 3,660 feet below sea level, as was recently shown in Fleetborn Oil Co. No. 2 J. Smith. In other parts of the field the



Type of surface connections used on wells by one operator in the Fitts pool. Practically all of the well-head fittings are in the cellar, which is covered by flooring

sand dips below the water level. In its productive area the Wilcox sand is thick and loosely consolidated. Wells drilled into it have established large potentials. Casing is set in the top of the Wilcox lime and cemented before the Wilcox pay is drilled. This is done in order to case off the upper pays in compliance with the orders of the Corporation Commission.

First International Consumers Petroleum Exposition

The organization of the Michigan National Petroleum Exhibition Co., Inc., which will sponsor the First International Consumers Petroleum Exposition to be held in Detroit December 5 to 13 was announced last week by Andrew M. Rowley. Mr. Rowley was connected with the editorial staff of The Oil and Gas Journal for 14 years and is widely known in the oil business. Headquarters of the Michigan exposition are located in the David Scott Building, Detroit.

The exposition will be the first held by the petroleum industry for the consumers of petroleum products. In connection with the exposition there will be published and distributed to the public a book covering all facts about the oil business which affect public welfare, such as taxation, legislation, low earnings, improvements in products and methods of operation and emphasizing widespread ownership by the public in the petroleum industry.

The purpose of the exposition is to acquaint the public through colorful pageants and exhibits with the tremendous strides made by the petroleum industry, in all branches of its operations. The American Petroleum Institute is arranging a comprehensive display covering taxes which for the petroleum industry last year amounted to $1,100,000,000.

The automotive and allied industries are cooperating with the exposition management in preparations for the exposition. William B. Way, general manager of the International Petroleum Exposition and Congress, held bi-annually in Tulsa, in speaking of the forthcoming exposition in Detroit, said: "Detroit, undisputed world headquarters of the automobile industry, which is the largest customer of the oil industry, is the logical city to be host to such an exposition." Glover Watson, president of the exhibition company arranging the exposition, has been in business in Detroit for 21 years. Bob Byers of Columbus, Ohio, vice president of the Lincoln Business Institute, is managing director.

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

Standard Methods for Testing Petroleum and Its Products

Will you please advise me where I can secure a book in which the laboratory methods for the testing of crude oil and petroleum products are described?—L. S. G.

The standard methods for testing crude petroleum products are described in the following:

General Specifications for Lubricants and Liquid Fuels (Methods for Sampling and Testing), Federal Standard Stock Catalog VV-L-791 a., Superintendent of Documents, Government Printing Office, Washington, D. C., price, 15 cents.

A.S.T.M. Standards on Petroleum Products and Lubricants, Prepared by Committee D-2, issued annually by American Society for Testing Materials, 260 South Broad Street, Philadelphia, Pa., price, $1.25.

Many of the methods described in the Federal Standard Stock Catalog are those of the American Society for Testing Materials. Both are recognized as authorities by the petroleum industry, and some of the states specify these methods in their inspection laws.

Acid Heat Test or Heat Reaction Test for Gasoline

What is the procedure for making the acid heat test as applied to the inspection of gasoline to be used for aircraft fuel?—J.R.

TEST FOR DETERMINATION OF ACID TEST

Apparatus—Bottle: The bottle shall be a 1-pint thermos or vacuum bottle, of the type commonly used in lunch kits and shall be provided with a metal cap. Cork Stoppers: Two of the usual tapered cork stoppers (at least 2 inches long and not over 1 inch in diameter at the smaller end) are required. One of these stoppers shall be vented with a hole, at least one-eighth inch and not more than one-quarter inch in diameter and both shall be impregnated with hard paraffin of melting point not less than 60° C. (140° F.). Thermometer: The thermometer shall conform to the specifications set forth in the B. of M. Technical Paper 323-B, under A.S.T.M. Method 20.12 for cloud and pourpoint. Reagent: Commercial 66° Be. sulfuric acid having a specific gravity of not less than 1.834 nor more than 1.838 shall be used in this test. (93-94 per cent acid.)

Procedure—Step 1. 150 ml. of the fuel to be tested shall be measured into the bottle at approximately room temperature. The temperature of the fuel shall be observed after two minutes and recorded.

Step 2. 30 ml. of the sulfuric acid having the same temperature as the fuel, as observed in Step 1, shall be poured into the bottle, the one-hole cork stopper inserted and the bottle shaken gently with a rotary motion for one minute. The direction of rotation shall be reversed at least once during this preliminary mixing.

Step 3. The vented cork stopper shall then be removed, the thermometer inserted with its bulb in the acid layer and its maximum reading recorded. If the thermometer shows a temperature rise of as much as 15° C. (27° F.) the sample fails and the test shall be discontinued at this point.

Step 4. If the temperature rise during the preliminary mixing was less than 15° C., the thermometer shall be removed, the unvented cork stopper inserted, the metal cap screwed on so as to hold the cork firmly in place (using a spacer on the cork if necessary) and the bottle shaken for two minutes. An up-and-down motion which throws the liquid to the top shall be used in shaking. The rate of shaking shall be 130 to 160 up-and-down motions per minute.

Step 5. After completing this shaking, the metal cap and cork stopper shall be removed, the thermometer placed in the bottle with its bulb in the acid layer and the maximum temperature of the thermometer recorded.

Step 6. The differences in degrees between the initial temperature as determined in Step 1, and final temperature as determined in Step 5, shall be recorded as the acid heat of the fuel.

Note—The preliminary mixing, Step 2, is specified as a safety precaution to eliminate highly cracked samples which might develop excessive pressures when shaken in the bottle with unvented cork stopper, Step 4.

Reference: U. S. Bureau of Aeronautics, Navy Department, Washington, D. C., Tentative Aeronautical Specification M-222. Revised January 17, 1935.

SPECIFICATIONS

FUEL OILS FOR VARIOUS TYPES OF BURNING EQUIPMENT

(PART 1)

(Light Furnace Oils)

Number	Description (As required in burners)
1.	A distillate oil—a volatile fuel. 38-42 A.P.I. gravity.
2.	A distillate oil—a moderately volatile fuel. 32-36 A.P.I. gravity.
3.	A distillate oil—a low-viscosity fuel. 28-32 A.P.I. gravity.

Fuel oils are now available which vary from the black, heavy, almost solid oil to the nearly colorless light distillate. The furnace, or light distillate, oils are in demand for fuel in the smaller furnaces for heating residences and small buildings. Gravity and color requirements are for trade use. The lighter colors command the higher price. The small values in the table are per cents.

(All are max. unless otherwise shown)

Number	1	2	3
Flash °F. min./max.	100/150	110/190	110/200
Water and sediment	0.05	0.05	0.10
Sulfur	0.50	0.50	0.75
Carbon residue	0.02	0.05	0.15
Distillation, °F.:			
10 per cent	420	440	.....
90 per cent	.....	620	620 (min.)
E.P.	600	.....	.....

The pourpoint for Nos. 1, 2 and 3 is 15° F. max.; other limits may be required but not below 0° F. The min. of 90 per cent off at 620° F. for No. 2 shall be waived when carbon residue falls between 0.07 and 0.15 per cent.

The heavier oils will be described next week.

References: Fuel Oils, 3rd Edn., CS12-35, Nat'l. Bureau of Standards, Washington, 1935.

Identification of Straightrun and Cracked Kerosene

What methods may be used to distinguish kerosenes which have been made straightrun from crude oil and those derived from a cracked oil?—O.A.W.

I have had occasion to study two gasolines, that had been refined to very similar physical properties, one of which was a straightrun product from a mixture of high gravity Mid-Continent oils and the other was distilled from pressure distillate. The properties of these kerosenes are given in the table.

PROPERTIES OF KEROSENE

	Straightrun	Cracked
Gravity, A.P.I.	40.2	40.2
Flashpoint, °F.	175	162
Firepoint	196	184
Doctor test	sweet	sweet
Vis. (thermo.)	490	396
Sulfur, per cent	0.05	0.06
Gum copper dish, mgm.	7	188.7
Distillation:		
Initial, °F	362	372
50 per cent	452	432
90 per cent	515	478
Endpoint	561	508
Burning test	very good	poor

The low viscosity for the gravity of 40.2 A.P.I. and the large quantity of copper dish gum of one sample attracted attention as suggesting that this oil might be a cracked product. However, chemical analyses for aromatics and olefins it was thought, should give conclusive evidence. When the proper analyses of these oils were completed the results were, in per cents, as follows:

Kerosenes—	Olefins	Aromatics	Iodine No.
Straightrun	4	4	11
Cracked	11	10	35

Both kerosenes had been treated with acid and sweetened by the doctor solution. The high percentages of olefins, aromatics and the difference in iodine numbers are sufficient to indicate the source of the kerosenes. The results obtained by these analytical methods may also serve to permit a close approximation of the proportions of the two kerosenes present in a mixture.

Xylene Equivalent Meaning When Grading Asphalt

Could you give us the meaning of the term "xylene equivalent of asphalt"?—V. H. M.

Xylene equivalent is the quantitative expression developed for the Oliensis spot test for heterogeneity of asphalt. The procedure is similar as in the Spot Test (see The Oil and Gas Journal, April 16, 1936, this page), except that in place of naphtha, mixtures of naphtha and xylene in varying proportions are used, each measured from a burette. The 10.2 ml. naphtha, as used in the spot test, is replaced by the naphtha-xylene mixtures. Should a positive test be obtained within six to eight minutes, additional tests are made with increasing volumes of xylene and decreasing quantities of naphtha, in increments one to 0.1 ml., until a negative test is obtained at the end of 24 hours. The minimum percentage of xylene by volume in the mixed solvent required for a negative spot for a given asphalt is termed the xylene equivalent.

Reference: Thirty-ninth An. Meeting A.S.T.M., Atlantic City, Jan. 29, 1936. Preprint 85. A Further Study of the Heterogeneity of Asphalt—A Quantitative Method, by G. L. Oliensis.

Questions on Petroleum Technology may be sent to Dr. Charles K. Francis, The Oil and Gas Journal, Tulsa, Okla. When a copy of the answer is desired postage should be enclosed.

PROBLEMS FROM READERS

Edited by T. F. Smiley

Sand-Tamped Shot Is Recommended As Preferable to Fluid Tamping

Thank you for your advice concerning shooting wells in the Bartlesville sand in this area. I want to ask whether the sand-tamped shot is superior to the fluid-tamped. In one pool in which I am interested this sand ranges from 45 to 70 feet in thickness. There apparently is no water present when wells are drilled in, but after the shot considerable water develops. It has been a mystery where this water comes from. Our practice in this pool has been to use S.N.G. We drill a 6¼-inch hole through the sand, use 5½-inch shells and place the shot from the first showing of oil to the bottom of the hole. Sometimes we use a little anchor. I don't know why. This makes around a 200-quart shot. An electric shot is always used and we always have around 500 to 700 feet of fluid in the hole after pulling the 6¼-inch pipe. We also pull the 8¼, so nothing is left in the hole but the 20 feet of 10-inch drivepipe. This pool bottoms at around 865 to 890 feet. We recently shot a well using nine 5½-inch shells and a short shell getting in 200 quarts of S.N.G. This shot came out soon after detonation. We used 160 quarts in another well and 60 feet of limestone chat tamping. The shot did not come out, but we had a 20-day cleaning-out job, virtually mudding off the oil and water. We have not had much luck in bringing back the expected production. Several other tamped shots in this same field gave similar results. You evidently prefer heavy tamping to confine the shot to the swifter hole-cleaning hydrostatic method. You speak about shooting two-thirds of the sand. Our practice has been to shoot all the sand showing a good washout. If the shot is placed from the bottom up two-thirds, will the upper pay receive any benefit of the shot? Do you consider the solidified equal in every way to the liquid glycerin? I have never used a time bomb and am wondering just what the advantage is.—J. P. C.

This department is indebted to a well-known authority on explosives for the following answer to your question.

"In view of our experiences the country over we unhesitatingly recommend the use of the so-called sand-tamped shot in preference to any form of fluid tamping. As applied to your particular conditions and in view of our experiences in the Bartlesville sand elsewhere, we would consider it wise to avoid drilling completely through the Bartlesville sand when drilling in your wells because it is characteristic of this formation to find water very close to the bottom of it. Consequently, if any part of the shot is placed in a drill-hole which extends to a depth below the Bartlesville sand, there is danger of shooting into this water. If, for one reason or another, is is deemed necessary to drill below the Bartlesville sand, then this hole should be filled with sand, topped with about two feet of rock extending up into the pay zone so that the shells containing the explosive will rest on a firm foundation and so that the sand used may act as a buffer to destroy the disruptive action of the explosive and to prevent disruptive action on the water-bearing stratum. In this connection, I cannot condemn too strongly the use of anchor to support a shot of any kind or size, as obviously this frail tin tube cannot be an effective means of supporting the terrific pressure developed by the explosion which, of course, is transmitted to the bottom of the well by such excellent conductors as water or oil.

"With reference to shooting only two-thirds of the producing formation, this is considered good practice and you can rest assured that the full thickness of the pay sand will be affected by the shot if the shot is thoroughly confined, as the disruptive waves created by the explosion in conformity with physical laws travel outward and upward so as to make them effective to a considerable distance above the shot. This being true, it becomes obvious that where the shot covers the entire pay stratum, the upper part of the shot does little good in the pay zone and as a rule, is wastefully expended in doing harm above it.

"Where solidified nitroglycerin is used, it must be used intelligently to get best results from it, and it would be my thought that in a soft sand the hole should be filled with liquid, preferably oil, whether sand tamping be used or not as the hydrostatic head has a tendency to reduce the velocity of the explosive and thereby reducing the local pulverization. In further connection with the use of this explosive, I would like to have you appreciate that solidified nitroglycerin should not be confused with gelatin dynamites. I suggest that you be certain that only the 100 per cent explosive is used.

"The use of the time bomb is recommended in all wells where shots are tamped with sand, chat or whatever solid materials are used. The time bomb can be set for any period of time up to 24 hours. This is an important feature because it permits ample time for the sand to settle and to pack as solidly as possible. This is desirable because sand, which is more or less in suspension in a fluid body, is of little benefit as stemming since in suspension its only effect is to increase the density of the fluid and consequently, it has little holding effect at the time of the explosion. In our experience, best results are obtained where the sand is permitted to settle 12 to 24 hours, the time being determined by the conditions in the well such as the diameter of the hole, whether the fluid is dead or alive and on the amount of gas the well is making at the time the shot is placed in the hole."

WHY THEY CALLED IT *Seminole*

Seminole became a big word in the oil industry after the field of that name in Oklahoma was opened in 1926. It is the Creek Indian designation for fugitive and was applied to slaves who escaped from their masters and fled to Florida, as well as to Indians who for any reason left their kinsmen. Soon after Florida had been bought by the United States in 1819 a movement was started to transport the Seminoles to land west of the Mississippi River. This aroused indignation among the Indians, and the Seminole War was an outcome. Eventually only about 300 Seminoles were left by treaty in Florida. More than 1,000 others were moved to Indian Territory, now Oklahoma. Some 1,500 Seminoles now reside in Oklahoma, and about one-third that number dwell peacefully in the everglades of Florida.

Locating Leaks in Natural-Gas Lines Through Pressure-Drop Method

You made the statement in your answer to a question concerning methods of finding leaks in natural-gas lines that the best one is the pressure-drop method. You did not explain it, however, but gave other directions. I would be much obliged if you would tell what the pressure-drop method is and how it is used in finding leaks.—R. N. T.

The pressure-drop method of determining the amount of leakage in newly constructed natural-gas transmission lines consists, as the name itself indicates, in shutting in a line or some part of it under pressure through the use of blind discs, or plates, between pipe flanges and then ascertaining the rate of the pressure drop. This rate of drop in pressure is a measure of the actual loss of gas in cubic feet, since the volume of the pipe divided by the pressure base of measurement and this quotient multiplied by the rate of pressure drop gives the rate of leakage in cubic feet of gas. These values, of course, can be expressed in any units desirable. For instance, leakage directly from data obtained with the pressure-drop method of testing:

$$\text{Leakage} = 1{,}051\, d^2 \left(\frac{P_1 - P_2}{t}\right)$$

Where the leakage is expressed in thousands of cubic feet per year per mile of line (base pressure 14.4 pounds per square inch), d is the internal diameter of the pipe in inches, and $\left(\frac{P_1 - P_2}{t}\right)$ is the rate of pressure drop per minute corrected to a temperature of 60° F.

The correction of the rate of pressure drop to a temperature of 60° F. is made by correcting each observed pressure of the pressure drop to that which would occur if the temperature had been 60° F. For instance, if P_1' is the observed pressure, the corrected pressure would be expressed by $P_1 = P_1' \frac{T_s}{T_1}$, where T_s is the standard temperature (that is, 60° F.) and T_1 is the observed temperature. The corrected value of P_2 is obtained in a similar manner. Then, expressing the time in minutes by t, the rate of pressure drop, corrected for temperature is $\frac{P_1 - P_2}{t}$.

In cases of necessity the measurement of pressures can be made with spring gauges, especially if no definite and accurate values of leakage rates are desired, and when the object of the leakage test is mainly to show that the leakage rate is below a certain set minimum regarded as "allowable." In such cases, however, the spring gauges should be carefully calibrated and known to be in good condition and also the test itself should be made over a period of time to read an appreciable pressure drop. The main objection against spring gauges for leakage work is that a small per cent error in each of the pressures of the pressure drop may represent an important error in the pressure drop. For accurate measurement of pressures, the deadweight gauge should be used. This is simply a deadweight tester adapted for pressure measurements by connecting an oil reservoir made out of a pipe nipple to the tester, and having an oil seal between the gas from the pipe line and the plunger in the deadweight tester. Additional weights are calibrated to read pressures within 0.1 pound per square inch, to which measurements such an instrument is sensitive.

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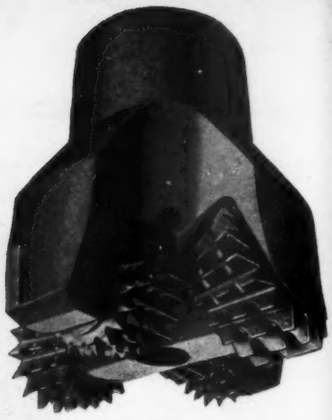

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The recently completed oil dock in Corpus Christi harbor in the foreground is not enough to handle increased oil shipments from Corpus Christi, and a third is being projected. At the time this picture was taken eight ships were in the harbor, three of them tankers

CITY GROWTH DUE TO OIL

By
GEORGE WEBER

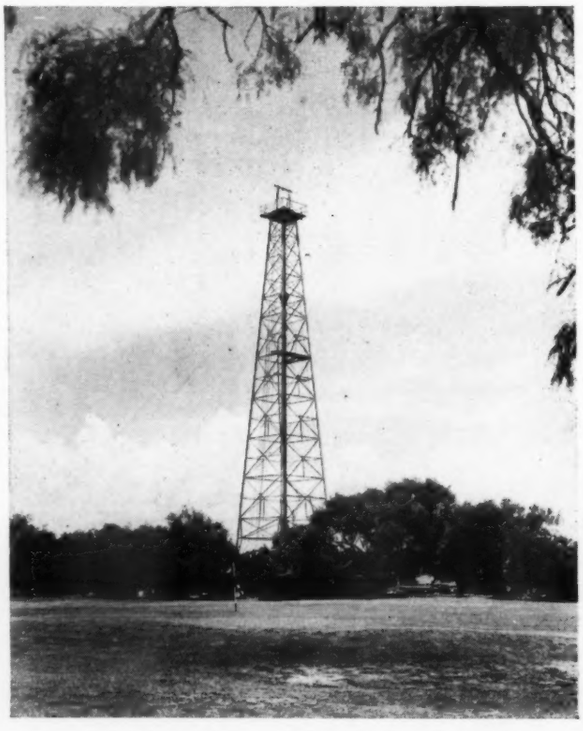
CORPUS CHRISTI, Tex., Aug. 17. Phenomenal growth as a rapidly developing oil center has brought the city of Corpus Christi to the attention of oil men throughout the country in the past several months. Unlike the activity which brings sudden advancement to many sections as a result of some one phase of the oil industry, however, the progress of Corpus Christi is based on fundamental trends which presage even greater expansion for that city.

Several divisions of the petroleum industry are responsible for the development of the Corpus Christi district. Two general classifications cover the field. First and most immediately effective on the district was the discovery of considerable oil production in Nueces County, reflected directly in Corpus Christi activity which has approached boom proportions since the first of the year.

Fully 100 rigs are drilling in a four-county area immediately adjacent to the city. Activity, which is divided among 15 wildcat locations and 10 fields, is largely directed from and supplied by Corpus Christi interests. The area is experiencing one of the most active drilling programs in the United States.

SERVES SOUTHWEST TEXAS

Second, and of a much more far-reaching consequence, is the unique position of the city as the natural focus for traffic in the products and supplies of the entire Southwest Texas oil industry. The asset of good deep-water shipping facilities and the proximity to the greatest centers of Southwest Texas field development constitute a fundamental factor in its progress as a pipe line terminus, refining center and headquarters for operating and supply companies. This factor opens to Corpus Christi the opportunity for handling much of the crude and otherwise serving an area which has added nearly 1,800 producing wells since the first of the year, the second most active area in the United States. This diversification of advantages guarantees the city's present position and points to long-time future development.



Slush pits and drilling rigs have added new hazards to the golf course at the Corpus Christi Country Club, located in the center of the field. This test being drilled by George Echols, Houston contractor, as viewed across one of the greens

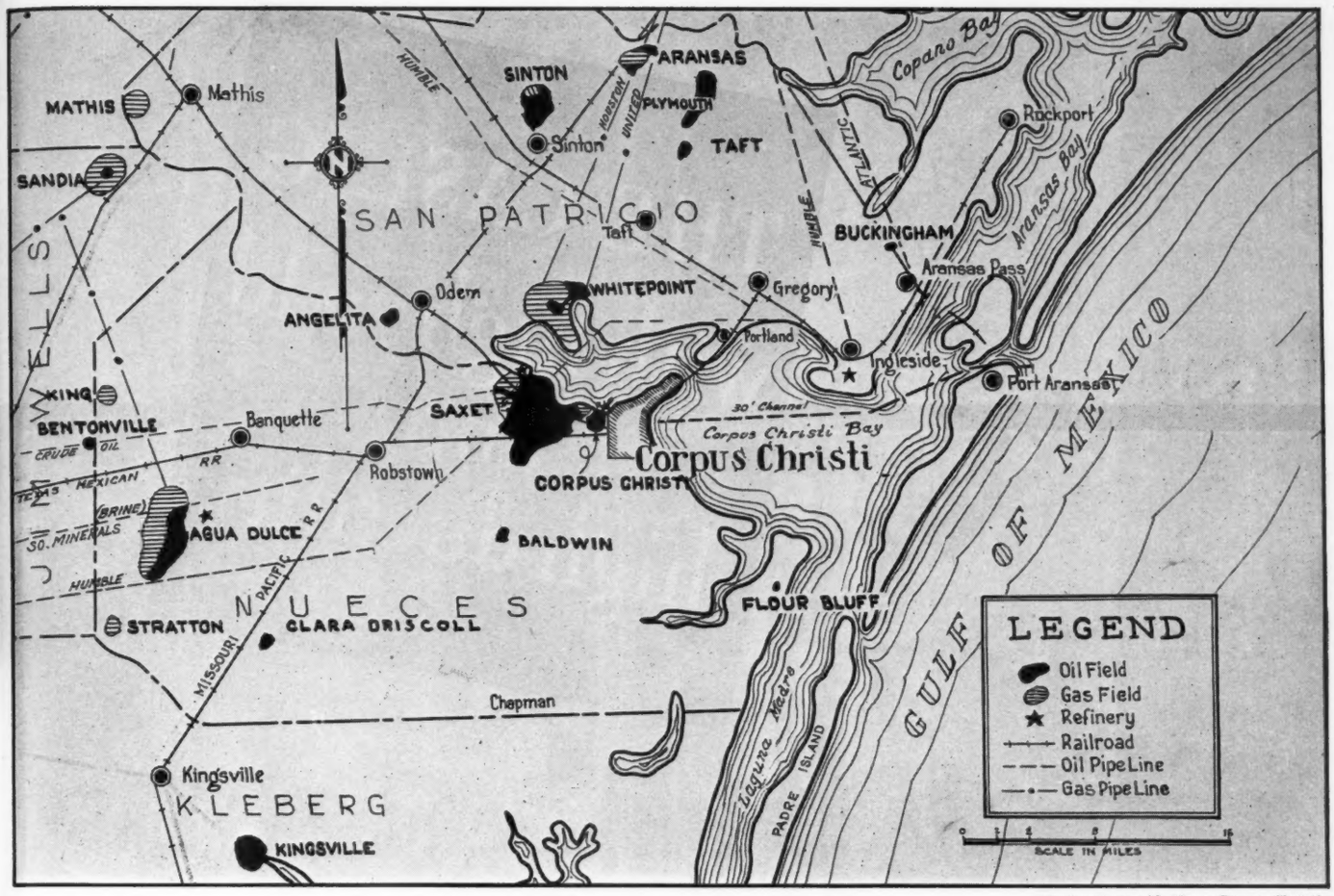
The discovery and exploitation of the Corpus Christi field has had possibly the greatest effect on the city in the past six months. Located on the outskirts of the city, the field caused the influx of many independent operators from East Texas, the Laredo district and other sections together with the attendant labor, supply personnel and the usual lease brokers and followers of such developments. This event, while predominant for a time, was not indicative of stable growth, and the field, which has yet to show promise of important production, is exerting a continuously lessening effect on the development of the city.

SAXET FIELD

Later discoveries which accompanied the revival of active drilling in the Saxet field just west of Corpus Christi are now the dominant factor. Saxet was drilled for many years in several shallow sands, producing gas primarily. The opening of a sand at 4,400 feet in the vicinity of Clarkwood has given that district continuous activity for several months. The most important sand in the field, however, is the recently discovered 5,800-foot horizon which shows by far the greatest possibilities for major production. Development of this latter sand now accounts for the greatest activity in the section.

Of a less spectacular nature, but at the same time steady and basic is the drilling in the Plymouth and Taft field to the north of the city. Both fields, particularly Plymouth, are the scenes of routine drilling with no indication of slackening in activity for some time to come.

Nor is the future of actual drilling and field development in the Corpus Christi



—Porter Regenold, Maps, Corpus Christi.

—Porter Regenold, Maps, Corpus Christi.

MAPS OF CORPUS CHRISTI AREA AND SAXET HEIGHTS FIELD

***ABOVE:** The Corpus Christi district, lying on the Lower Gulf Coast of Texas, is the scene of considerable recent development in drilling, production, pipe line, refinery and shipping activity. The city and area serve as an outlet for crude and an important inlet for supplies of the Southwest Texas oil industry*

***BELOW:** The Saxet Heights field located on the western edge of Corpus Christi is also known by that city's name. Development is at present primarily on the east edge of the field, although producing limits have not been defined on the north, or parts of the west edges*

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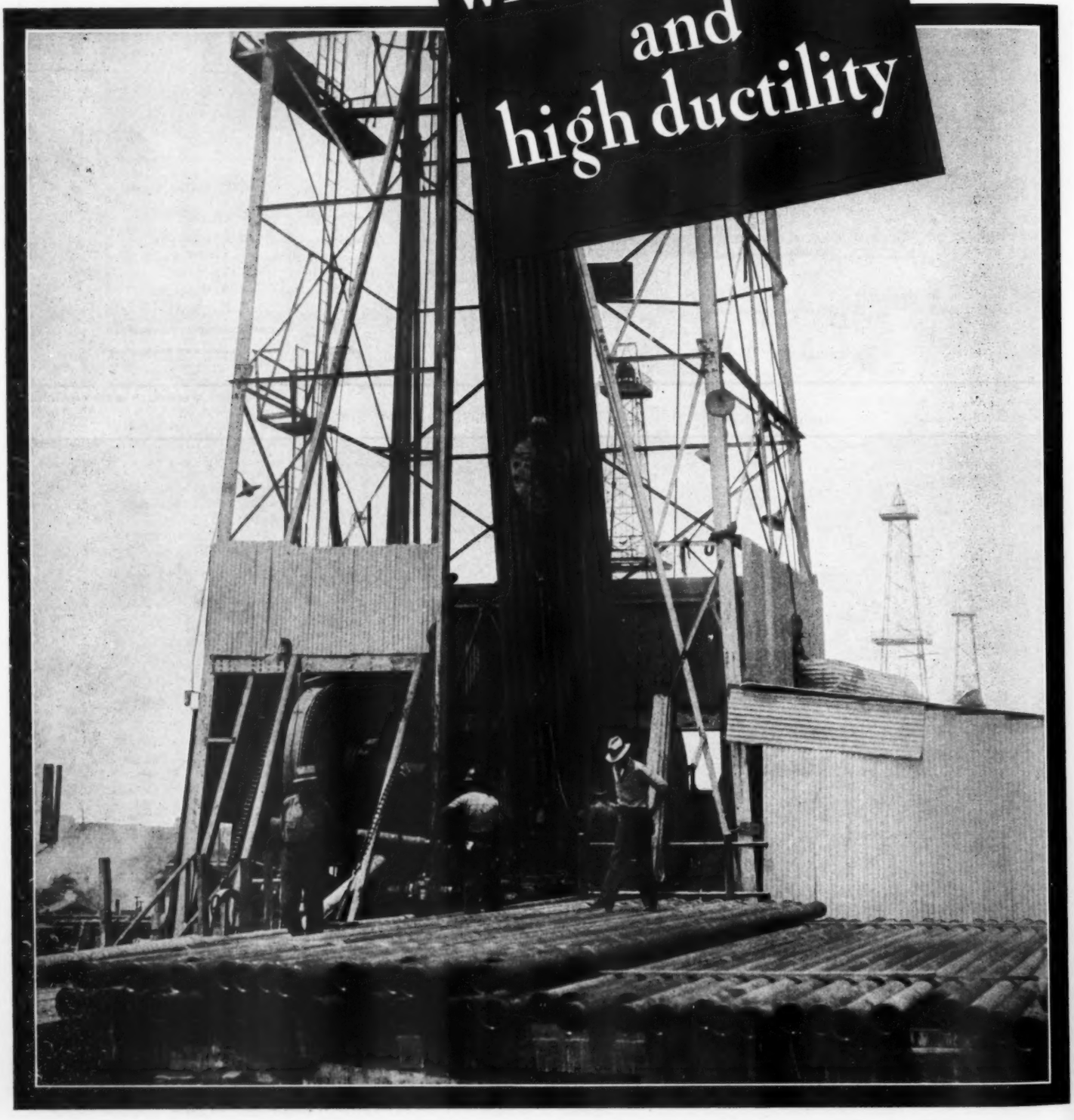

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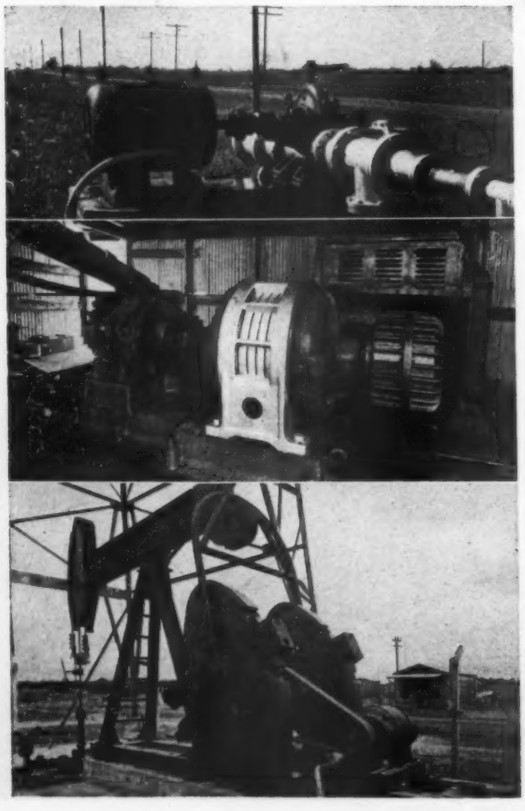
On the other hand, the real economies of Purchased Electric Power and the electric motor cannot be disclosed by any operating statement. The operating cost is there in one obvious figure each month. But the safety, the cleanliness, the convenience, the dependability, the prestige and the general satisfaction in modern equipment are not easily calculated or overestimated.



Think well before you decide against Purchased Electric Power for any oil country job. And remember this: Your Power Company has an engineer who is as definitely and impartially at your disposal as though you paid his salary.

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area dependent on these few large fields. At present there are three producing areas which have been recently discovered and which show possible indications of attaining proportions equal to those of established fields. The nature of the fields in that section adds further to the probability of increasing crude production, yielding from many horizons and affording intensive as well as extensive developments.

CORPUS CHRISTI BUILDING

The effect of this drilling activity has taxed the facilities of the city. Conservative estimates place the total population of Corpus Christi and the numerous subdivisions on its edge at 50,000. This represents a gain of more than 10,000 persons over last year. Accommodations for nonresidents in the resort city have always been maintained at an unusually large figure. Its six principal hotels together with smaller ones and tourist camps provide 2,700 rooms which is insufficient at present to care for the increased population as yet unsettled. Result is a building program which shows gains weekly. Owners of vacant lots are induced to build private homes for rental purposes. Permits for 732 residential and commercial building projects at a total cost of over $1,000,000 were issued in the first seven months of 1936; with July the most active in both respects. The ability of Corpus Christi to absorb the increase in population which at present is averaging more than 1,000 per month will aid in establishing its growth as permanent.

The expected decline arising from the temporary nature of activity in the Corpus Christi field is already showing its effect. Operators who entered the field with insufficient background will gradually withdraw, leaving room for the legitimate operator who becomes a permanent member of the community. This second and more basic influx of oil people is now clearly felt.

ADMINISTRATION

A factor marking stable growth of an oil center is the establishment of the administrative divisions of oil companies. This movement has already filled all available office space in Corpus Christi, and has led to the building of additional office room. On a per capita rating, Corpus Christi lays claim to more square feet of office space than any other American city, much of which space is now occupied by companies directly or indirectly concerned with the oil industry. On August 1, the Humble Oil & Refining Co. established a division office in that city, replacing the two former divisions in Laredo and San Antonio. This brought approximately 65 families to the city, marking it as the headquarters for that company's operations in all of Southwest Texas.

The home office of the Republic Natural Gas Co. has been moved from Houston to Corpus Christi to provide better administration of that company's operations in the nearby fields. The head offices of the Heep Oil Co. and the Conroe Drilling Co., also former Houston companies, will be housed in a two-story office building now under construction. The Southern Minerals Corp. has taken possession of new office space made necessary by that company's expansion of operations in Saxet. In addition, many other operating companies, supply houses, pipe line and shipping companies and other units of the industry are establishing offices in the city.

The business of supply for the fields in the Corpus Christi vicinity has grown to be an important one. Starting with the development of the Corpus Christi field, and supported by the subsequent drilling increase in Saxet and other areas, the "Supply Row" of the city now includes stores of more than 25 companies, most of them national in scope. Several others have located elsewhere in the city. Indicative of the permanent nature of the activity is the fact that many of the companies have made long-term leases for the property, while several have purchased outright. Permanent building is also the trend, with some companies erecting steel and concrete structures.

With the immigration of oil people of this caliber, the problem becomes one of providing permanent residence space. This will give rise to the building of homes by oil families themselves.

A development now in the comparatively initial stages, but slated for large future possibilities

TO BETTER SERVE YOU IN SOUTH TEXAS
WE'VE OPENED THIS CORPUS BRANCH

The busy Corpus Christi, Texas, territory, like so many others, has *gone O-C-T* for well hook-ups. These 'trees are not down there by just dozens, or scores, but by hundreds! And to better serve this good patronage we've opened a store so that a complete warehouse stock is conveniently available to Supply Companies and so our own representatives are right on the job . . . . . not just one, or two, but five of them.

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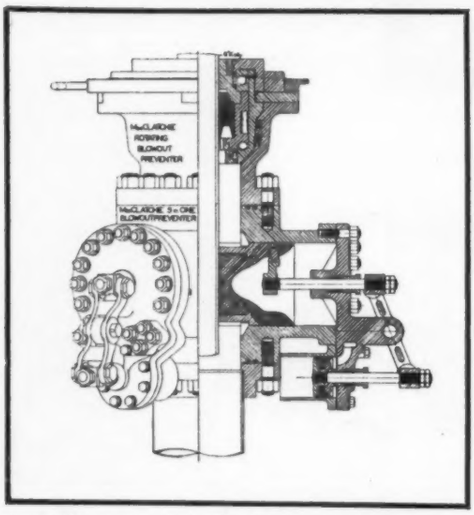
OPERATABLE FROM DERRICK FLOOR—WITHSTANDS ANY PRESSURE ENCOUNTERED—FAST CLOSING—PACKS OFF ANY PART OF DRILL STEM WITHOUT CHANGING PACKERS—ELIMINATES EXTRA EQUIPMENT



Both Units of the MacClatchie Pressure Hookup have many superior features. For the utmost *safety* and *efficiency* insist on them for your next pressure job.

Both units of the MacClatchie Pressure Drilling Hookup have been designed for the safety of crews. They both operate instantly from the derrick floor thereby eliminating the hazard of men entering an oil drenched and gas filled cellar.

The "5 in 1" Blowout Preventer is operated by turning a throttle valve—completely packing off any portion of the string regardless of shape or size in 55 seconds or less. Since no sand or mud can interfere with its proper functioning it has a certainty of action. In no other equipment can be found these features: Adaptability to pack different sizes—phenomenal speed—positive operation.

The MacClatchie Rotating Blowout Preventer. Its construction is so rugged and its design so simple that it will stand up under extremely hard usage.

The rotating unit is operated by pulling a rope which is run from the cellar to the derrick floor—latching or unlatching the kelly packer instantly. The packer includes a packing assembly and a swivel, with the packing assembly rotatable with the kelly and swivel providing anti-frictional bearings for the packing assembly. Designed for drilling under any mud or gas pressure.

Without any change in packing, the MacClatchie "5 in 1" Blowout Preventer will pack off any part of the string such as Drill Pipe, Kelly, Drill Collar, Tool Joint or Pipe Collar.

The MacClatchie "5 in 1" Blowout Preventer can be rented or purchased outright. The Rotating unit is rented only.

MacCLATCHIE MANUFACTURING CO.
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is the establishment of manufacturing and oil refining industries in and around Corpus Christi. At present the dominant example is the modern plant of the Southern Alkali Corp. This concern, allied in several ways with the oil industry, has taken advantage of the ready sources of supply and power, and of deep-water transportation facilities. A building program was just completed providing homes for 35 to 40 families of company employes.

The refining industry is at present represented by three plants in the environs of Corpus Christi. This phase of the industry is showing immediate indications of considerable development, with construction now under way doubling the capacity of the Corpus Christi Refining Corp. plant and adding to the facilities of the Humble Oil & Refining Co. at Ingleside. Plans are now being perfected for the addition of two refineries to the area.

The ideal location between the oil production of Southwest Texas and the water shipping facilities of the Corpus Christi harbor providing outlet to coastwise and foreign markets is expected to bring still other refiners to the Corpus Christi area in time. An abundant supply of cheap power in form of gas offers further inducements to many sorts of industry, Southwest Texas comprising a source of natural gas second only to the Texas Panhandle.

Under present conditions projected refineries are experiencing a drawback in the lack of ready crude in Corpus Christi, but development of local fields and installation of additional pipe lines to the more remote sources are expected to remedy the apparent shortage.

Inducements to attract improvements of this sort are constantly being augmented by the Nueces County Navigation District, in the addition of oil docks and the deepening of the ship channel to accommodate ocean-going vessels of larger draft. By the deepening of the channel from Aransas Pass to the second turning basin at Avery Point the value of the harbor will be greatly enhanced, and frontage on the channel will offer much better opportunities for industrial sites.

NUECES COUNTY DRILLING

The present drilling activity in Nueces County is shown in the list of operations under way:

AGUA DULCE—NUECES COUNTY

Parker, Foran & Knode No. 1 J. G. Ingram, sec. 9, Ross Peters Subd. No. 2, T.D. 4,768 ft.; ran tbg. 4,695 ft.; comp.; gasser; no gauge.
Texon Royalty Co. No. 1 Elliff, 466 ft. E line, 2,194 ft. S line tr., Longorio grant. Drlg. hd. sh. 6,423 ft.

CLARA DRISCOLL—NUECES COUNTY

C. W. Killam No. 2 Ellich, 1,120 ft. N line, 330 ft. E line, 86-ac. tr., sec. 109. C'll sd. 3,881-3,908 ft.; perf. 3,889½-94½ ft.; comp.; est. 50,000,000 ft. gas.
H. M. Reed No. 1 Roper, Lot 12, Blk. "E," sec. 108, R.U.
Santa Clara Oil Co. No. 3 Clara Driscoll, Sevier Sur., 697 ft. E line, 1,980 ft. S line, 500-ac. tr., sec. 109, Paul Subd. Drlg. 2,465 ft.

FLOUR BLUFF—NUECES COUNTY

Gem Oil Co. No. 1 J. T. Smith, Lots 20 and 21, sec. 47, M.I.M.

SAXET HEIGHTS—NUECES COUNTY

Callahan Oil Co. No. 1 Best, 5-ac. tr., Ehlers Garden Trs. Sd. 4,086½-91 ft.; set csg. 4,091 ft.; S.D. 4,132 ft.
W. W. Chapman No. 1 Reed, C Blk. 4, Country Club. Sd. 4,070-83 ft.; comp.
Federal Oil Co. No. 1 C. R. Priour, cen. Blk. 15, Oak Park Addn. M.I.M.
Genro Drlg. Co. No. 1 Poth, C Blk. 6, Port View Addn. Drlg. 2,563 ft.
Gibralter Bldg. & Savings Assn. No. 1 fee, 90 ft. N line, 200 ft. E line, Lots 21 and 22, Country Club, T.D. 4,102 ft.; comp.; 120 B.P.D. on 5/32-in. ck.
Grace Oil Co. No. 1 Eden, 10-ac. tr., Ehlers Garden Lots. Set csg. 4,079 ft.; drlg. plugs.
Hamil & Smith No. 1 Johnson, 330 ft. S and E lines tr. Drld. plugs 4,077 ft.; swbg. in.
Harrison et al No. 1 Porcher, Blk. 2, Woodlawn Addn. Top sd. 4,050 ft.; swbg. in.
W. H. McConnell No. 1 fee, 10-ac. tr., Villareal Sur. Sd. 4,051-69 ft.; completing.
Morgan Bros., Inc., No. 1 Dodson, cen. ½-ac. tr., Blk. 12, Bancroft Farm Lots. Sd. 4,065-87 ft.; comp.; 200 B.P.D.
W. N. Paul No. 1 Shallert, Blk. "D," Harbor View Addn. T.D. 4,067 ft.; comp.; 96 B.P.D.
W. N. Paul No. 2 Shallert, cen. Blk. "C," Harbor View Addn. Set surf. csg. 500 ft.; W.O.C.
Pedernal Oil Co. No. 1 Priour, C Blk. 15, Oak Park Addn. Set csg. reperf. 4,074-79 ft.; comp.; 67 B.P.D. on 5/64-in. ck.
Pedernal Oil Co. No. 3 Priour, Blk. 12, Oak Park Addn. Set sur. csg. 500 ft.; W.O.C.
Pedernal Oil Co. No. 1 P. J. M. Roy Co., cen. Blk. 14, Oak Park Addn., Villareal Sur. Set csg. 4,084 ft.; W.O.C.
Port O. & G. Co. No. 5 Cohen, 14.8-ac. tr. Drlg. 3,029 ft.
Port O. & G. Co. No. 3 Country Club Pl., C Lot 31, C.C. Pl. Addn. Perf. 4,074-80 ft.; swbg. in.
Port O. & G. Co. No. 7 Country Club Pl., cen. Lot 62, Oak Park Addn. R.U.

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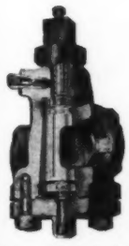

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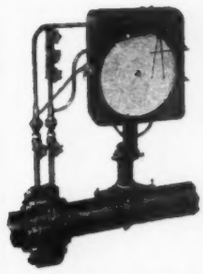

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Our efforts will not only be devoted to building improvements into meters, regulators and lubricated plug valves, so as to produce the highest degree of perfection and safety and to the development of new products which will help the industry in its march forward, but also to render efficient service through the medium of branch offices and warehouses with complete stocks, located at strategic points, under the direction of trained sales and service engineers.

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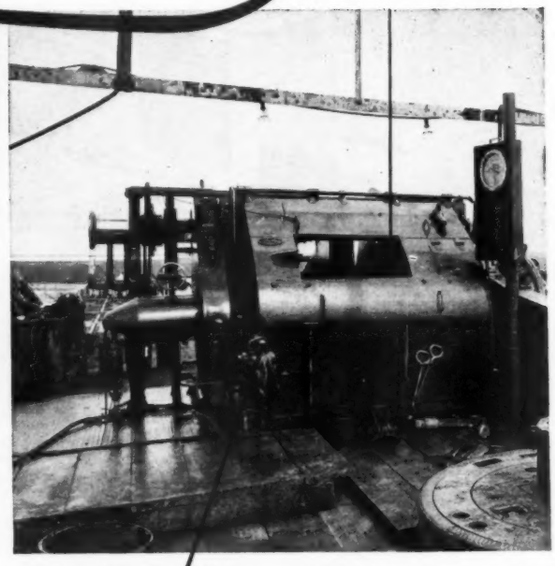
DREADNAUGHT 360-Ton Capacity, 6-Sheave, Straight Line Crown Block and 309-Ton Capacity, 5-Sheave Traveling Block on a deep well at Dickinson, Tex.



DREADNAUGHT No. 41 Unitary type, 3-Shaft, 4-Speed Draw-works digging a deep test at Bryan Mound, Brazoria County, Texas.

In the hard rock formations of Oklahoma . . . in the deep, tough gumbo and shale of the Texas and Louisiana Gulf Coast, stamina and speed of DREADNAUGHT heavy duty Drilling Blocks and Draw-works have been definitely proven.

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J. D. Proctor No. 1 Simonton, 100 ft. E line, 68 ft. N line, 1-ac. tr., Lots 46 and 47, Country Club Place. Drk.
Renwar Oil Corp. No. 1 Guaranty Title & Trust Co., Lot 9, Blk. 12, Villa Gardens. Perf. 4,084-86 ft.; S.D.
Richardson Pet. Co. No. 2 Priour, C Blk. 11, Oak Park Addn. T.D. 4,075 ft.; comp.; 160 B.P.D. on 5/32-in. ck.
Richardson Pet. Co. No. 3 Priour, cen. Lot 13, Oak Park Addn. Skidding on.
Rupert Cox No. 1 Lawrence, 330 ft. N and E lines, 32-ac. tr. Cg. 3,993 ft.
Saxet Prod. Co. No. 1 Uehlinger, 10-ac. tr., Blk. 12, Bancroft Farm Lots. Sd. 4,075-83 ft.; comp.; 150 B.P.D. on 3/16-in. ck.
Saxet Oil Co. No. 1 Walker, Lot 16, Ellendale Gardens No. 1. R.U.
Taylor Ref. Co. No. 3 Corpus Christi Golf and Country Club 73-ac. tr. Drlg. 4,023 ft.
Taylor Ref. Co. No. 1 Robinson, 10-ac. tr., Villareal Sur. Sd. 4,082-89 ft.; tstd. oil; set csg.; W.O.C.
W. A. R. Oil Co. No. 2 Dunn, 8½-ac. tr., Villareal Sur. Drlg. 3,118 ft.
Westgate Oil Co. No. 4 Sturm Est., 83-ac. tr. Sd. 4,069-80 ft.; comp.; 120 B.P.D. on 5/32-in. ck.

SAXET—NUECES COUNTY

C. Andrae No. 1 McGregor-Belk, 330 ft. N line, 367 ft. W line lse., Sur. 311. Cg. 5,792 ft.
R. B. Bryant No. 1 Scoggins, 330 ft. N and W lines, 20-ac. tr., Sur. 315. M.I.M.
H. D. Carpenter No. 1 Harmon, 330 ft. S and E lines, 50-ac. tr., G. Frank Sur. 416. Sd. 5,827-35 ft.; tstg.
W. W. Chapman No. 2 Humphrey, 660 ft. No. 1, 20-ac. tr., Stevens Sur. Drlg. 3,326 ft.
Chapman, trustee No. 3 Morgan Clark, sec. 405. Sd. 5,802-26 ft.; set csg. 5,832 ft.; W.O.C.
Conroe Drlg. Co. No. 3 Bliss, 330 ft. N and W lines, 105-ac. tr., Stevens Sur. Drlg. 5,421 ft.
Conroe Drlg. Co. No. 4 Bliss, 330 ft. S and W lines, 105-ac. tr., Stevens Sur. Skidding rig.
Conroe Drlg. Co. No. 5 Bliss, 330 ft. N line, 1,085 ft. W line, 105-ac. tr., Stevens Sur. Sd. 5,791-5,830 ft.; comp.; no gauge.
Conroe Drlg. Co. No. 1-D Rand Morgan, 330 ft. S and E lines, W½ NW¼, sec. 405. Drlg. 2,563 ft.
Gilcrease Oil Co. No. 2 Sullivan, 330 ft. N line, 990 ft. E line, 140.13-ac. tr., Gallagher Sur. Drlg. 3,132 ft.
Tom Graham No. 1 Harmon, 330 ft. N and E lines, 34-ac. tr., Sur. 416. Drlg. 5,342 ft.
Hiawatha Oil Co. No. 1 Morgan, 330 ft. S and E lines, Sur. 405. Cutting old tbg.; cleaning hole.
W. B. Hinton No. 2 Cole, 990 ft. E line, 330 ft. S line, 60ac. tr. Sd. 4,838-67 ft.; set csg.; W.O.C.
Houston Oil Co. No. 1-A fee, 330 ft. S and E lines of tr. Drlg. sh. 3,721 ft.
Houston Oil Co. No. 3 Harrell, Blk. 19, Sheppard Farm Lots. Sd. 4,542-50 ft.; comp.; no gauge.
Houston Oil Co. No. 4 Harrell, Blk. 19, Sheppard Farm Lots. Sd. 4,848-54 ft.; comp.; no gauge.
Houston Oil Co. No. 1 McGregor, 800 ft. N line, 1,450 ft. W line, Sur. 311. (Workover). Sd. 5,813-35 ft.; comp.; 479 B.P.D.
Houston Oil Co. No. 6 McGregor, 137.59-ac. tr., Sur. 582. Set surf. csg. 1,300 ft.; W.O.C.
Mills Bennett Prod. Co. No. 1 Kassner, 990 ft. S line, 330 ft. E line, 100-ac. tr., SE¼ Sur. 409. Skidding on.
Mills Bennett Prod. Co. No. 1 Ordner, 330 ft. S and E lines, 210-ac. tr., Sur. 410. T.D. 5,521 ft.; P.B.; sd. 4,092-4,100 ft.; perf. 4,078-82 ft.; reperf. 4,083-87 ft.; comp.; 200 B.P.D. (est.) on 3/16-in. ck.
North Star Oil Co. No. 3 Humphrey, Stevens Sur. Drlg. 2,555 ft.
North Star Oil Co. No. 3 Rand Morgan, 330 ft. E line, 1,650 ft. S line, W½, SE¼ sec. 405. Sd. 5,786-5,822 ft.; completing.
North Star Oil Co. No. 4 Rand Morgan, 330 ft. N and E lines lease, Sur. 405. Sd. 5,789-5,833 ft.; perf. 5,820-34 ft.; completing.
North Star Oil Co. No. 7 Rand Morgan, 990 ft. S line, 330 ft. W line, SE¼, sec. 405. Set surf. csg. 1,006 ft.; W.O.C.
North Star Oil Co. No. 8 Rand Morgan, 330 ft. S and W lines lease, Sur. 405. Sd. 5,810-35 ft.; comp.; 192 B.P.D. on ½-in. ck.
North Star Oil Co. & Morgan Oil Co. No. 1-G Rand Morgan, 330 ft. N line, 250 ft. E line, Sur. 403. T.D. 5,560 ft.; D.&A.
Oso Drillers, Inc., No. 4 Roark, 660 ft. E line, 1,200 ft. S line, 106-ac. tr. Pits.
Pan American Pet. Co. No. 1-C Morgan, 330 ft. S and E lines 160-ac. tr., B.S.&F. Sur. 405. Sd. 5,805-29 ft.; comp.; 129 B.P.D.
Pan American Pet. Corp. No. 2-C Rand Morgan, 160-ac. tr., Sud. 405. Sd. 5,781-5,824 ft.; set csg.; W.O.C.
Pan American Prod. Co. No. 1-F Rand Morgan, 330 ft. S and E lines, NW¼, sec. 405. Drlg. 4,357 ft.
Phillips Pet. Co. No. 4 Hutchins, Blk. 29, Sheppard Farm Tracts. Drlg. 3,465 ft.
Phillips Pet. Co. No. 2 Rand Morgan, 330 ft. N and E lines, E½, SE¼, Sur. 405. Set sur. csg.; W.O.C.
Phillips Pet. Co. No. 3 Morgan, 330 ft. N and W lines, 60-ac. tr., Sur. 405. Drlg. 1,956 ft.
Phillips Pet. Co. No. 4 Morgan, 193 ft. W line, 330 ft. S line, 60-ac. tr., Sur. 405. Set surf. csg.; W.O.C.
Phillips Pet. Co. No. 6 Morgan, 990 ft. N line, 330 ft. W line, 60-ac. tr., Sur. 405. M.I.M.
Renwar Oil Corp. No. 2 Rand Morgan, 990 ft. W line, 330 ft. N line, 80-ac. lse., Sur. 315. Drlg. 3,256 ft.
Richardson Pet. Co. No. 2 Harrell, 330 ft. N and W lines, Blk. 33, Sheppard Farm Lots. Drlg. 3,423 ft.
W. A. Richardson No. 1 W. S. Hutchins (workover), 330 ft. S and E lines, 80-ac. tr., Sh. 2, Frank Sur. 416. Sd. 5,881-98 ft.; tested S.W.; W.O. orders.
Richardson Pet. Co. No. 1 Quiros, Blk. 39, Sheppard Farm Lots. Drlg. 5,712 ft.
Sinclair Prairie Oil Co. No. 2 Isensee, 330 ft. S and E lines, 80-ac. tr., C. Land Sur. 404. Cg. 5,716 ft.
Southern Minerals Corp. No. 8 Bliss, 120-ac. tr., J. W. Stevens Sur. 406. Sd. 5,799-5,826 ft.; set csg.; W.O.C.
Southern Minerals Corp. No. 9 Bliss, 330 ft. N and W lines, S 120-ac.tr., Stevens Sur. Drlg. 5,056 ft.
Southern Minerals Corp. No. 12 Bliss, 120-ac. tr., Stevens Sur. Drlg. 3,137 ft.
Southern Minerals Corp. No. 13 Bliss, 120-ac. tr., Stevens Sur. Drlg. 3,470 ft.
Southern Minerals Corp. No. 6 Isensee, 330 ft. N line, 990 ft. W line, 235-ac. tr., C. Land Sur. 404. Drlg. 4,856 ft.
Southern Minerals Corp. No. 3 Mastin, 990 ft. S line, 330 ft. E line, 125-ac. tr., G. Frank Sur. 416. Cg. 5,297 ft.
Texon Drlg. Co. No. 2 Isensee, 150 ft. N line, 112 ft. W line, 13.44-ac. tr., C. Land Sur. 404. Spudded.
Texon Drlg. Co. No. 2 Kocurek, Ward Sur. 316. Drlg. 3,216 ft.
Wynne Drlg. Co. and J. H. Coker No. 2 Rand Morgan, 330 ft. N and W lines, 20-ac. lse., 469-ac. tr., Surs. 315 and 592. Set surf. csg.; W.O.C.
Warner Quinlan Co. No. 4 Isensee, Blk. 1, Sheppard Farm Lots. T.D.; sd. 4,547 ft.; odor oil.

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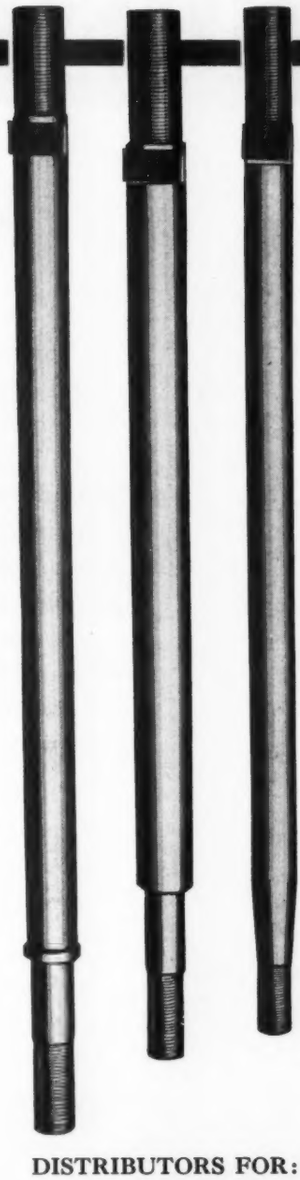

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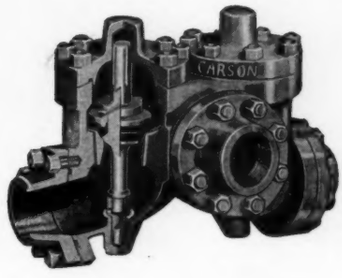

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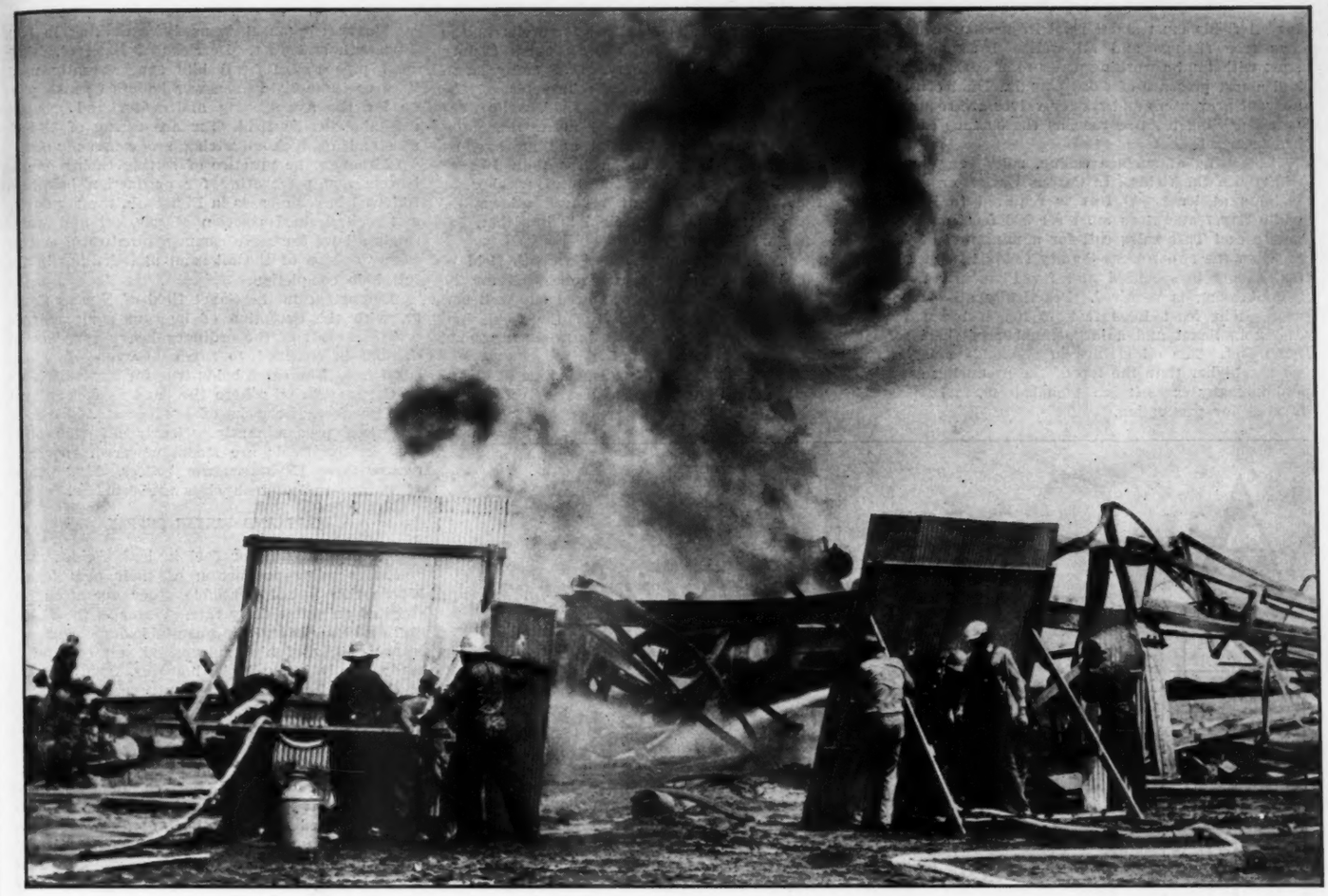


A wild well in the Plymouth field which blew out several weeks ago destroying rig and derrick. The fire was extinguished and the well was shut in, making a good producer after recompletion

Heavy Equipment Used in Drilling to Combat High Pressures in Sands

CORPUS CHRISTI, Tex., Aug. 17.—The type of drilling in the area immediately surrounding Corpus Christi involves few outstanding features aside from the control methods practiced to combat the high pressures in sands of that section. In size and design, rigs used in this district fall between the relatively light types drilling the shallow soft formations of the Laredo district to the west, and the heavy special equipment required on many of the deep Gulf Coast tests drilled to the north and east. Production is found in many horizons, ranging to depths of 5,900 feet, and present operations are concerned mainly with sands below the 4,000-foot level. The formations encountered in drilling are relatively soft; fishtail digging comprising nearly all of the operations.

The methods of operating as regulated by the railroad commission are largely influenced by the high pressures prevailing in sands of that area. In this respect rules to prevent blowouts and to insure proper control at all times are generally applicable to both field and wildcat operations. The type of control equipment required, the mud regulations, casing programs and other factors dealing with high-pressure conditions are relatively fixed throughout the area.

Corpus Christi serves Southwest Texas as an important inlet for oil field supplies as well as a crude outlet. Quantities of pipe and casing have entered the harbor in the past six months

A minimum gravity of 11 pounds per gallon is set by the commission for drilling muds used in the Corpus Christi district. This gravity as measured by the regulation cup hydrometer is generally adhered to by operators in the area. An exception to the ruling is made for the Taft field, a recently discovered area in San Patricio County. There mud gravity is set at a minimum of 10 pounds.

The viscosity of drilling muds is closely checked by the majority of operators. Railroad commission rules place the maximum at 35 seconds as determined by a standard funnel type viscosimeter. Again Taft is the exception with an allowable viscosity range of 33 to 55 seconds. Control equipment

for all fields must stand rigid inspection. Christmas tree fittings and all wellhead connections must withstand a working pressure of 2,000 pounds and a test pressure of 4,000 pounds. Dual control blowout preventers and master valves are required on all drilling tests as soon as the surface casing has been set.

In setting of surface casing, rules vary somewhat with the fields. In Corpus Christi or Saxet Heights at least 500 feet is required to be set while Saxet operators must set 900 feet and Plymouth and Taft rules call for a minimum of 400 feet. In the two Nueces County fields 1,100-pound test casing is specified and for Plymouth 1,400-pound casing is required. Practically all companies set at least 1,000 feet of 10¾-inch surface casing in Saxet and a large number of them set 1,250 feet. The oil strings in all fields must be set not higher than the top of the producing sand and in many cases it is set on bottom, to be perforated for production.

Ten-acre spacing is specified for wells in the Saxet, Saxet Heights and other Nueces County fields. Because of the presence of many small operators, and the subdivided character of the Saxet Heights or Corpus Christi field, wells were drilled on tracts as small as 1 acre. Since the allowable is based on potential and acreage, as in Saxet, the wells drilled on less than 10-acre tracts, comprising half of the total number in the field, are producing at reduced allowables. The average for the entire field is less than 7.5 acres per well.

In San Patricio County, the Plymouth field is being developed on the basis of one well for 20 acres. Taft, to the south, is allowed one well per 10 acres in the original sand of the field, but the 20-acre ruling applies to wells producing from the Plymouth or deeper sands.

Taft is producing from two sands, one at about 4,900 feet generally conceded to be the Grota sand, and a second sand opened later at about 3,900 feet.

Heavy equipment is used for drilling in both Plymouth and Taft. Derricks of 122 feet, 4-inch drill pipe and fishtail bits are generally used. Two or three 125-horsepower boilers furnish power for the average rig and water and gas are available in the field. Surface casing of 13-inch size and 7⅝-inch oil string are commonly set.

Although the practice of setting casing on the bottom and perforating for production has been followed in some cases in Plymouth, the regularity and well defined position of gas, oil and water sands allows the more common practice of setting casing on top of the oil sand and drilling in for full hole completion.

Equipment in the Saxet field of Nueces County, with the exception of blowout equipment, is practically all of the ordinary heavy type, as all drilling is confined to sands between 4,000 and 5,800 feet. The same holds true for Saxet Heights or Corpus Christi where the sand is encountered at 4,100 feet. Derricks of 142-foot standard type are used predominantly. Nearly all rigs operated in the fields are steam powered, requiring two or three 150-horsepower boilers. Mud pumps of 18-inch and 20-inch sizes are common.

GAS AND WATER SUPPLY

Gas is plentiful for fuel in both fields; most operators using production of their own leases. Where this is not available other operators are supplied on a flat daily rate. Water in the fields' shallow sands is entirely unsuitable for steam generation, being of high sulfur and salt content. A ready supply is available, however, from the city of Corpus Christi and the Southern Alkali Corp. The city mains from Calallen traverse the two fields. With this supply water treating is not required in either field.

In the 5,800-foot sand of Saxet, at present the most actively developed horizon in the entire Corpus Christi district, gun perforation is generally practiced in completion of wells. The nature of the sand, where the gas-oil contact is not clearly defined, necessitates this procedure. Perforation is especially satisfactory in this sand, as it readily allows for squeeze jobs and reperforation in case of excess gas production. Screens of 16-18 gauge are run on perforation jobs. In the 5,800-foot sand all that is ordinarily necessary to complete the wells is to wash thoroughly and shut off the pumps, allowing the well to come from its own pressure. In other sands it is sometimes necessary to rock the wells in with gas on line pressure of 350-400 lbs. and a few wells of the field require swabbing.

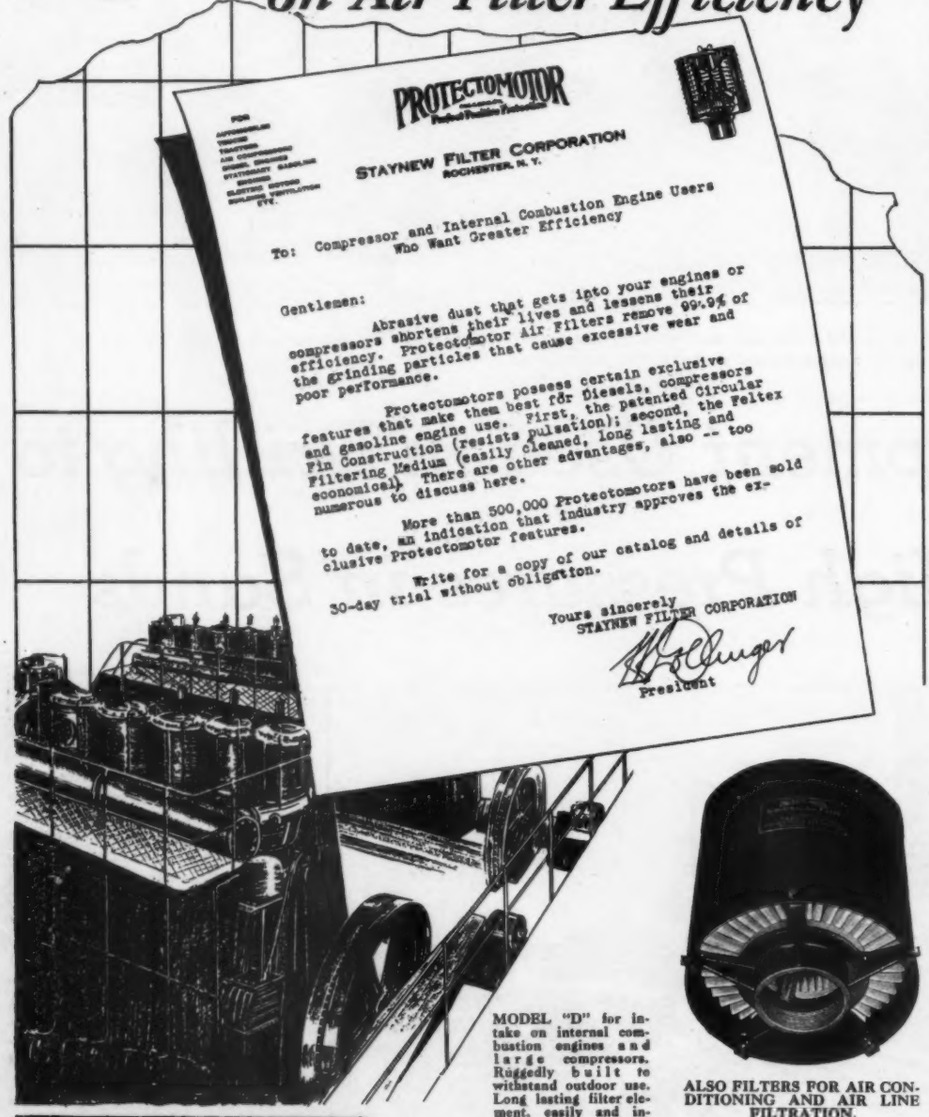
Drilling in Saxet, Saxet Heights and all other fields of the general district is done with fishtail bits. A few formations encountered irregularly on the structures require rock bit drilling. From five to eight hard-surfaced fishtail bits are used in drilling the usual 5,800-foot test in Saxet, the necessity varying with the nature of lenticular sands encountered in drilling to that depth.

DRILLING TIME

Drilling periods vary but little over the major fields of the section. In Plymouth the period from rigging up to bringing in a well averages three weeks. Corpus Christi operators generally make better time, with a shallower sand and relatively less high-pressure conditions. In Saxet some of the 5,800-foot tests are brought in 15 to 20 days after spudding, but additional casing programs and careful drilling practices extend this time usually to as long as four weeks. Some tests have required even more time, difficulty in completion involving considerable reworking. The tests drilled by one company to the 4,800-foot sand over a period of several months averaged 20 days, and wells in the 4,400-foot sand averaged slightly shorter drilling periods.

The cost of drilling in the Saxet and Saxet Heights fields varies with the operators. An estimate on Saxet Heights wells is around $22,000. In Saxet, the 5,800-foot producers cost from $30,000 to $35,000, and for the shallower sands, correspondingly less, the 4,800-foot wells costing an estimated $30,000. These figures vary considerably with the operators; depending upon whether drilling contractors or company rigs are employed. Many other comparative costs of individual operators and larger companies are factors in the relative costs of operations.

An Open Letter ....
on Air Filter Efficiency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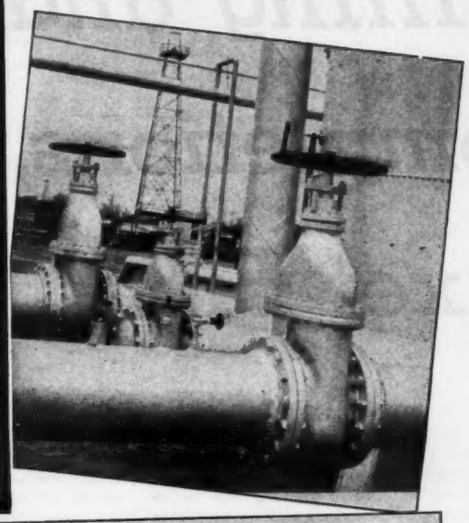

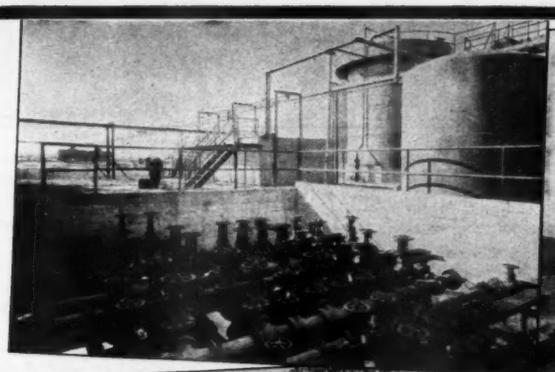

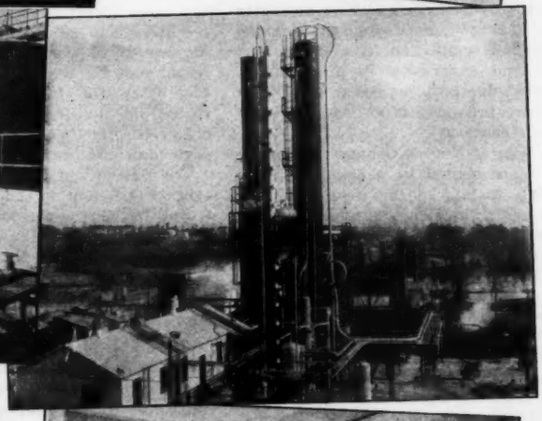

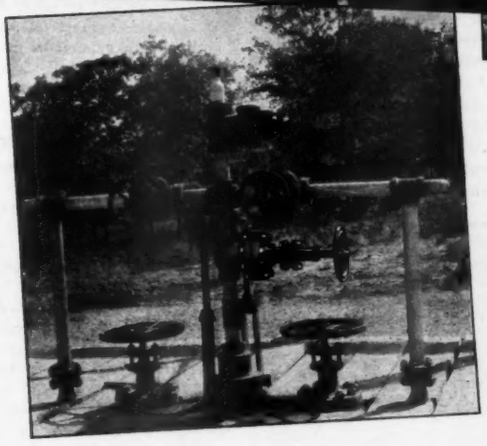

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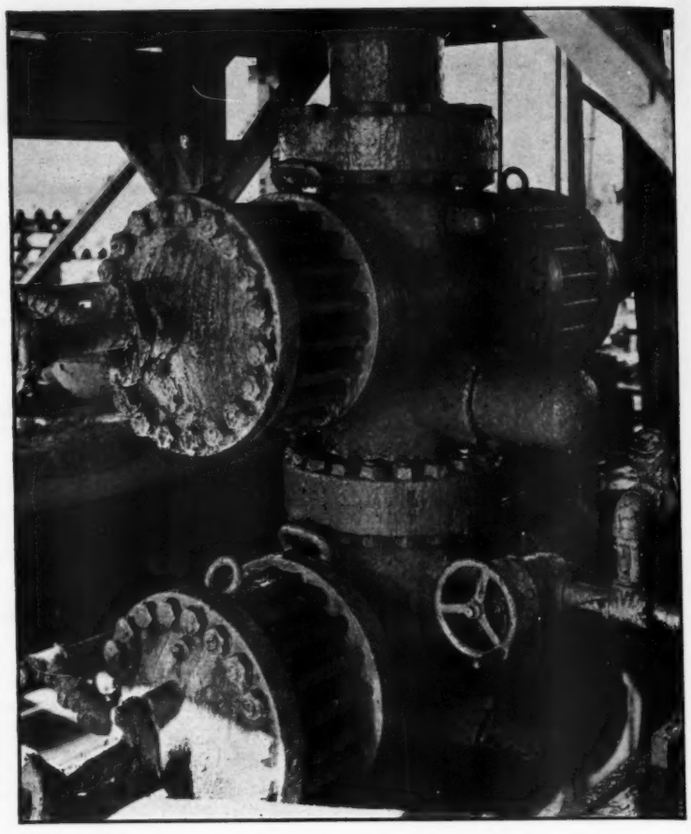
Difficulties in Drilling and Completions, Saxet Field



Typical high-pressure equipment used in wells of the Saxet field. High gas pressures constitute a major hazard in drilling this area

CORPUS CHRISTI, Tex., Aug. 17. Operators in the lower Gulf Coastal fields generally must deal with unusually high pressures in the formations encountered in drilling. The multiplicity of sands, the hydrostatic and rock pressures and the presence of large quantities of gas combine to make drilling and completion of wells in that district difficult and hazardous. In all fields of the area the knowledge of practices dealing with the control of these pressures is an essential part of every operator's concern.

In the Saxet field of Nueces County the danger in this respect is augmented by a condition arising from the early history of the field. Inexperience in this type of drilling, coupled with the carelessness of a few operators, resulted in the loss of control of several tests bottomed in some of the deeper sands of the field. These blowouts occurred in some instances without casing set in the hole, and in other tests leaks in the casing which had been set admitted the high-pressure gas from the deeper formations to the shallow sands prevalent in the field. Cratering of a few of the early blowouts further charged the shallow sands with high-pressure gas, and the condition of the field today is similar to that existing in the Refugio field a few miles to the north.

SHALLOW SANDS DANGEROUS

The result is that operators, in drilling through shallow sands in parts of the field, will encounter pressures greatly in excess of the normal hydrostatic pressure which would be expected at the lesser depths. This condition has led to a number of blowouts in recent months, due primarily to the inexperience or heedlessness of proper methods to curb high gas pressure.

The Saxet field, however, is not alone in the recent blowout series of the section. Other field and wildcat tests have gone out of control, causing serious loss to operators and land owners and considerable harm to subsequent production conditions. The Saxet field, because of its particular threat, is of primary interest.

In addition to the many oil-producing sands found in Saxet there are several sands containing gas now under high pressure. These sands are encountered at the following general depths: 300 feet, 1,000 feet, 2,100 feet, 3,200 feet, 3,600 feet and 4,000 feet. The two most shallow sands contain water, and blowouts have occurred from them in water wells drilled in the field, the pressure being sufficient to kick the water to the surface. These sands at shallow depths comprise the greatest hazard to drilling, because of their unexpected high pressures.

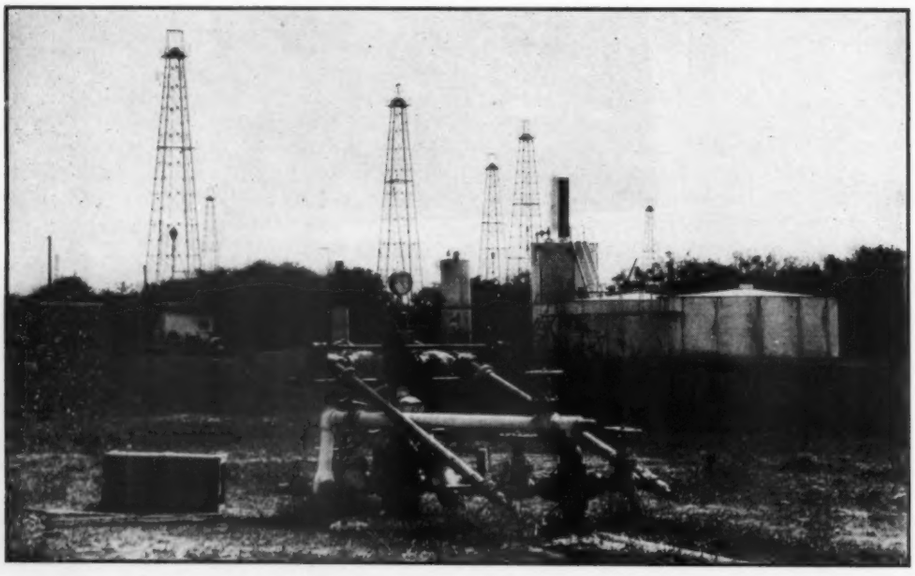
Blowouts in the Saxet field, and in any of the other areas of the district, can be traced generally to failure in observing the precautions as outlined by the railroad commission in its rules concerning operations in the district. Some of the Saxet wild wells went out of control due to improper setting of surface casing. Cause of others can be laid to lack of supervision of mud conditions. The failure to keep the hole full of mud when coming out with drilling string or testing tool can be cited as another cause of blowouts.

BLOWOUT PREVENTION EQUIPMENT

Negligence with respect to proper blowout prevention equipment is a condition which places an operator in a helpless position in case of any of the above mentioned emergencies. The installation of properly designed and thoroughly tested blowout preventers and auxiliary equipment is of prime importance.

A number of practices have been evolved in Saxet from the experience gained by some of the major operators, leading to the better control of the pressure situation. In addition to the regulations laid down by the railroad commission these operators have adopted extra safety measures. In regard to the casing programs in the field the setting of a relatively short string of what is termed conductor casing is an increasing practice. From 150 to 300 feet of 16-inch casing is set. This string serves two general purposes. It cases off any gas or water sands which might cause trouble before surface casing is set, and it provides something solid for the operator to tie into in case of threatened blowout prior to setting surface casing. This latter service aids in preventing a common blowout danger risked in setting the surface string. If proper control precautions are not taken immediately after running cement high-pressure gas at the bottom of the casing may cut the cement before it has set. While a blowout threat is not prevented by the existence of a conductor casing the operator is aided by the solid string in keeping the well under control.

A very important safety factor in drilling in Saxet is the constant supervision of mud conditioning. While 10½-pound mud is used in many tests



The Corpus Christi field, showing type of christmas trees used, and proximity of derricks on tests being drilled on small leases

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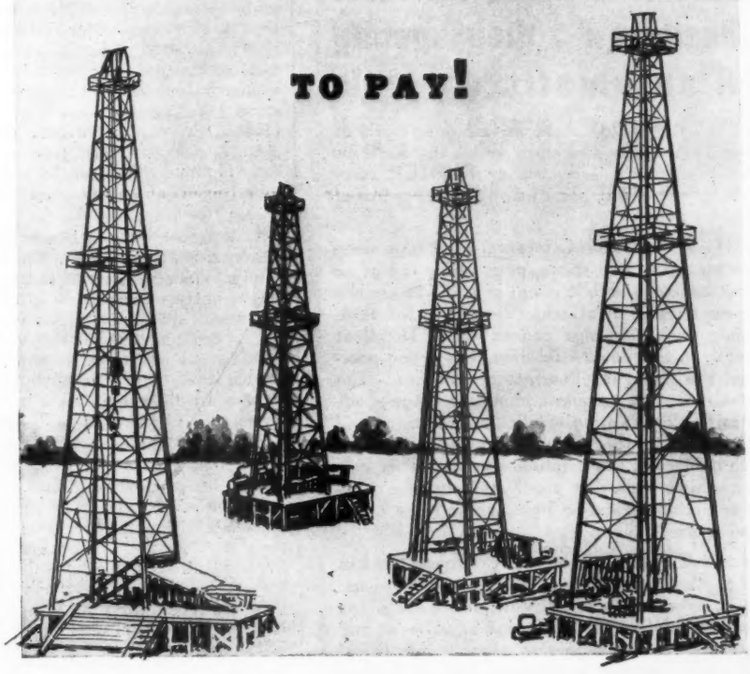

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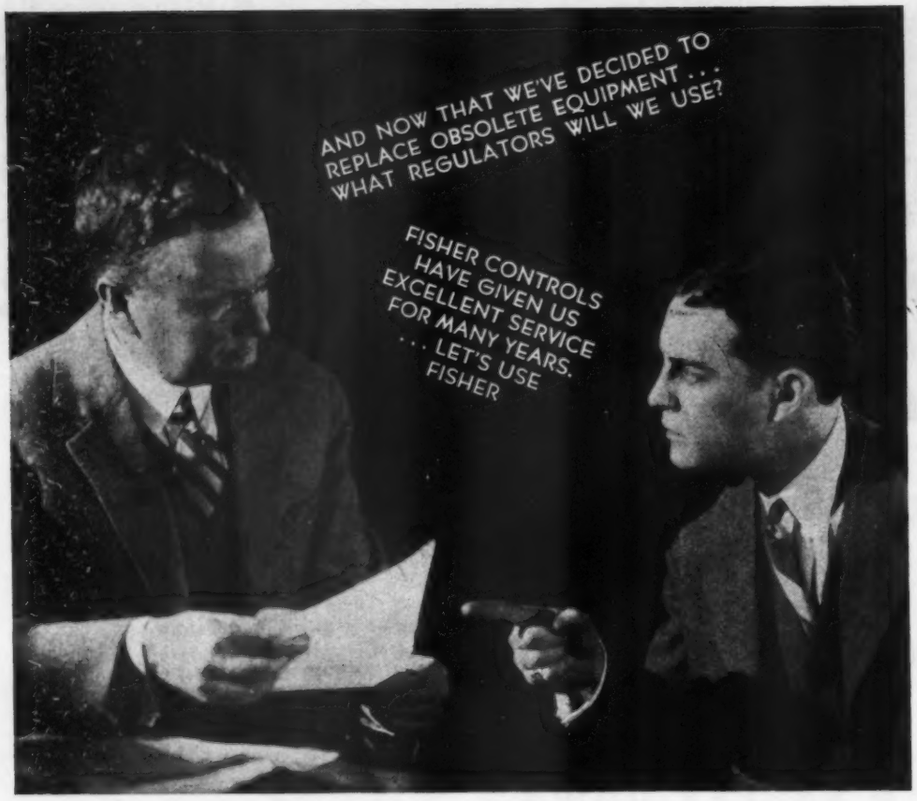
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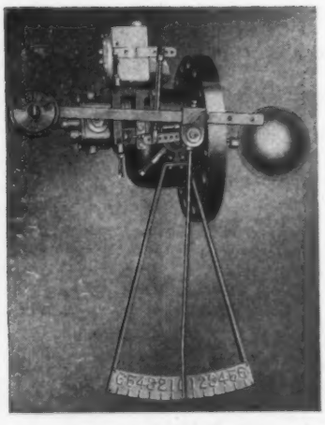
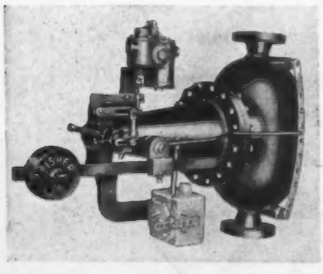


FISHER Type No. 234-C Internal Float Level Controller complete with pilot valve, explosion proof switch, and level indicator.



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where the field rules call for an 11-pound minimum, the careful check kept on its condition is regarded as sufficient to make that gravity mud safe. The mud viscosity is closely watched by most operators. The field rules set 35 seconds as the maximum, but some companies keep the viscosity at 28-30 seconds, the most operators retain a viscosity nearer 30 than 35. The gravity and viscosity are checked several times each tour by some crews. This is done directly by the derrick man, who is in turn checked by the driller and superintendent. Constant checking is especially important when drilling plugs in surface or oil string, as cement cuttings have an appreciable effect on the mud. A practice which is gaining in use is to drill nearly to the bottom of the casing shoe and then recondition the mud before drilling through.

MUD CONDITIONING IMPORTANT

In conditioning mud viscosity and gravity are controlled by use of gallic acid, Quebaco, sodium phosphate, caustic soda and commercial weighting materials. Mud pits with baffles and long wooden ditches are employed to aid proper settling out of cuttings. This step is important, due to the large percentage of sand drilling. The wooden ditches are built in some cases to encircle the suction pit, giving a large settling surface and providing for easy removal of cuttings. Mud guns are a common installation in pits to insure proper uniformity of mud. Shale-shakers are not yet commonly seen in Saxet, but their increased use is expected from the satisfactory results on removal of gas and cuttings so far noted in the field.

Increased care of drillers in coming out of the hole, either on round trips or with testing tool, is another step toward better control in the field. When sufficient circulation precautions are not carried out to refill the hole at each stand the swabbing action of the string coming out contributes to a serious blowout threat.

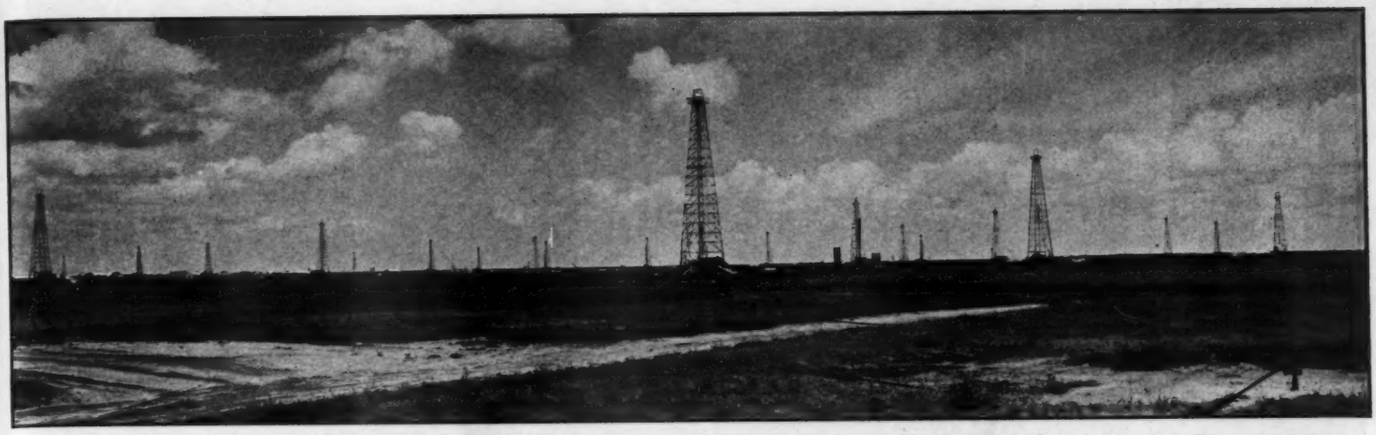
The constant checking of blowout preventers and other safety devices on tests in Saxet is as important as the initial installation of the proper type and weight of such equipment. The field rules call for the dual control blowout preventers and master valves on all drilling wells as soon as the surface casing has been set. Frequent tests of blowout preventers are generally practiced in the field. A good procedure recommended by one company is the testing of the blowout preventer backed by a packoff at every tour. These tests are carried to 5,000-7,500 pounds.

The recent wave of blowouts in the Saxet field and surrounding district, which has reached the total of eight wild wells, is believed partially due to the entry of operators into the area from districts where dangerous pressure conditions do not exist, particularly the Laredo district of Southwest Texas and East Texas. Failure to heed commission rulings and inexperience with operations in the section are traceable causes in several cases.

The method of bringing wild wells under control in Saxet and other fields of the area has been fairly well established. A heavy manifold with a swedge bottom is stabbed into the top of the casing by means of a heavy truck equipped with a boom. When stabbed on the tool is securely tied down and then the flow is checked with the heavy valves in the manifold. Cement and mud are then pumped into the hole, killing the well. This practice has been used on nearly all wild wells in the area. Difficulty is encountered due to the cutting action of the sand, which, being soft in most formations, blows out in great quantities.

Development of the Saxet Field Rapid Due to Small Tracts

Initial drilling in the Saxet field adjacent to the city of Corpus Christi and across the bay from White Point was prompted by the area's location along the strike south of, and in proximity to, the productive White Point field across Nueces Bay. The first well to show gas, according to A. E. Getzendaner in A.A.P.G. Bulletin, was the Pioneer No. 1 Meaney, drilled about 1922. The first well completed as a commercial gas producer was drilled in 1923. This was the Saxet Oil Co. No. 1 Dunn. The first oil well in the field, the Saxet



Extensive drilling in the Saxet field west of Corpus Christi has resulted from the opening of a deep producing sand in the Frio formation. Few operators in the field have yet drilled any inside lease locations in this sand, and continued activity is projected for several months in the future

Oil Co. No. 6 Dunn, was completed in 1930. By the end of 1935, 115 wells had been completed in the Saxet field, 52 having been completed during that year.

During 1935 J. H. Culton No. 1 Baldwin in Nueces County established production in the Basal Miocene at 4,077 to 4,082 feet to open up another field of probable importance. Development of this area has been rapid because all the acreage is divided into small tracts and held by independent operators.

The discovery oil well in the Saxet field was Saxet Oil Co. No. 6 Dunn, which drilled the plug and penetrated 11 feet of sand with some shale from 4,297 to 4,308 feet on August 9, 1930. This well is located about 5 miles west of the city of Corpus Christi in Nueces County. Before being conditioned the well was making about 85 per cent salt water and its oil production was variously estimated as ranging from 25 to 300 bbls. The oil is 24 degrees gravity and closely resembles that from the Refugio oil field at 3,700 feet with flash-point of 205 degrees; fire, 230 degrees; 23 per cent gas oil and 77 per cent fuel oil.

This well is in the northern part of the field, probably on the northeastern slope of the structure, according to W. Armstrong Price in A.A.P.G. Bulletin, October, 1930. Showings of oil were encountered at depths between 1,200 and 4,100 feet in four wells in the gas field. Gas is produced in several sands from 1,700 to 4,100 feet. Gas sands commonly carry water, making between 20 and 200 bbls. or more per day. By the end of 1935 about 3,300 acres of gas and 1,000 acres of oil production had been proven. The oil wells had yielded about 1,006 bbls. of oil per acre up to the end of 1935. One test had been drilled to the Frio formation at 7,060 feet without finding oil.

The old (eastern) portion of the Saxet field, according to A. E. Getzendaner, is contoured as a gradually eastward dipping nose. Graphic correlations are reasonably satisfactory there, since, as a general rule, the "2,300-foot" or the "2,500-foot" gas sands were the objectives of the older wells, and were found and properly logged. Wells furnishing good paleontologic information in this division are, for example, the Saxet company's No. 6 Dunn and No. 2 Donnegan. The top of the Discorbis zone is found in productive wells in this portion of the field as low as 4,900 feet and the top of the Heterostegina zone as low as 5,200 feet.

The western portion of the field has a dome-like structure with slight western closure. However, the Discorbis zone is found there as high as 4,450 feet and the Heterostegina zone as high as 4,700 feet. Good type logs in this portion of the field with excellent fossils to accompany them were secured from Gulf Coast Oil Co. No. 1 Bessie Elder and the Perkins & LaGasse No. 1 drilled by Titus & Calloway.

Jose Sanchez of Buenos Aires, South America, who has represented the Columbian Steel Tank Company for many years in Argentina and other South American points, sailed from New York August 8 aboard the S.S. Southern Prince terminating an extended visit to the United States.

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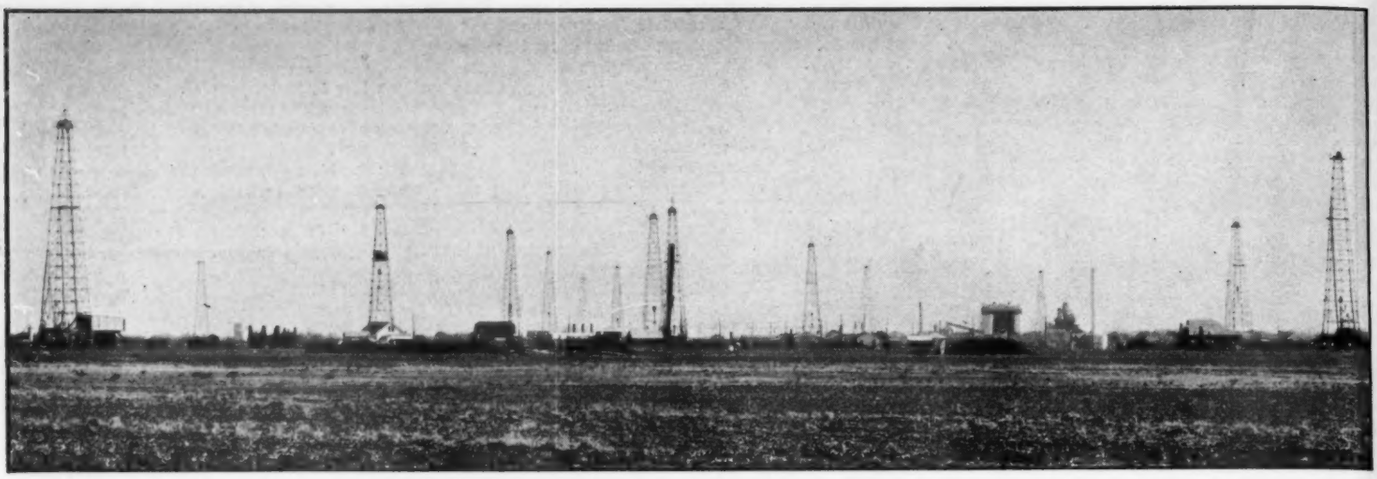


Panoramic view of a portion of the oil and gas fields on the outskirts of Corpus Christi

SUBSURFACE GEOLOGY IN SAXET FIELD

CORPUS CHRISTI, Tex., Aug. 17.—The Saxet field lying west of Corpus Christi has been the scene of intermittent drilling for the past 14 years. Early development of the area was restricted to gas production in shallow sands, and later activity opened unprolific oil production in sands ranging from 2,300 to 5,850 feet.

As the field stands today, however, it represents the major potential source of crude in the Corpus Christi district, with appreciable oil reserves in at least eight different sands. The subsurface geology of Saxet is as variable as the number of sands producing in it; most of them being of a lenticular nature. Faulting plays a major part in the field structures, and the effect of a possible deep-seated salt dome intrusion has been neither proven nor disproven.

Dating back less than a year, the present importance of the field became evident when a revival of drilling took place in that section. Result was the opening of several deep sands which have given the field its present important status. Sands from 4,000 to 4,450 feet were brought into production, termed the new Saxet shallow area. A 4,800-foot sand already well developed at the first of the year was called the new Saxet deep production. The latest and most important horizon to be opened was at 5,800 feet, and is designated as the Frio sand. This latter is now the most actively developing horizon in the entire district.

NEW FRIO SAND

The 5,800-foot sand is today the prime producing horizon in Saxet. It is clearly differentiated from the other shallow sands of the field by its nature, body and extent. Lying in the Frio section, it corresponds to the Heep sand which produces the larger share of the crude in Plymouth, to the north in San Patricio County. Of the Frio sands it is significant as one of the greatest sources of potential crude supply, and its discovery was a development of major importance to Southwest Texas.

Altogether, the character of the sand, the prevailing reservoir pressures and the size of the structure combine to make it the principal factor thus far considered in the future development of the field.

SAND STRUCTURE

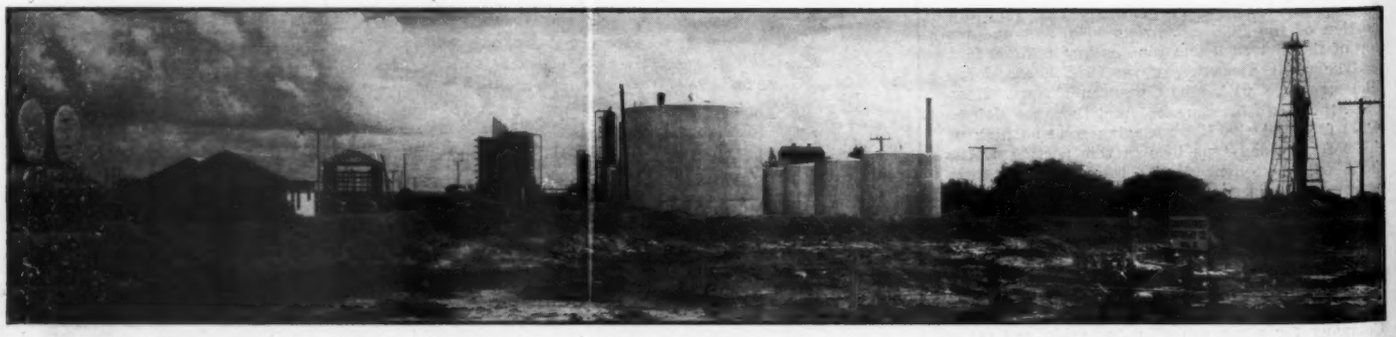
The primary factor in the existence of this reservoir is the northeast-southwest fault extending generally from the town of Viola to Clarkwood. With the upthrow side to the west and northwest, this fault is responsible for the oil accumulation in the Frio sand in those directions. The structure of this sand is not indicated from the general contours of any of the more shallow formations of the field. A study of the interval between the top of the Heterostegina zone and the 5,800-foot sand has revealed a distinct thickening of more than 100 feet to the west and northwest. This condition arising from the rapid depositional change in that interval is responsible for a steep plunging of the structure in the west and northwest directions, forming a closure for accumulation of the oil in the formation.

Due to the presence of a southeast dipping syncline, which nearly separated the sand into two distinct structures, the 5,800-foot horizon has the appearance of two domes lying on the upthrow side of the major fault. The north dome is located just south of the town of Viola, and the south dome lies northwest of Clarkwood. Wells drilled near the faulted area, and therefore encountering the producing sand at the highest points, show a thickness at the point of closure of about 40 feet between the top of the sand and the water level. The closure in the north dome is apparently less, from the elevation of the sand shown in wells of that area.

By its clean appearance, the 5,800-foot sand is easily recognized. It is coarse to medium grained, soft and grayish white in color, and is free of the shaley material which content characterizes the other sands of the field. A porosity of 28 per cent is fairly constant throughout the body.

AREA OF OIL SAND

The area of the oil sand in view of subsurface structure study and the position of the water level, will comprise nearly 2,250 acres. This estimate is based upon the showings in tests drilled on the south, north and northwest edges of the structure. Although as much as 40 feet of the sand has been taken in one well of the field, the average thickness does not in all probability exceed 25 feet. Thus with a calculated potential reserve of over 46,000,000 bbls. of oil together with nearly 30,000,000,000



The diversification of oil activity in Corpus Christi is well illustrated here. The background is the plant of the Corpus Christi Refining Corp. where extensive construction work is under way. A producer was recently completed in the adjacent Corpus Christi field, on the refinery property, with another test drilling in the background. Storage at the plant also comprises a terminal as the turning basin at Avery Point is only a few hundred feet distant

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feet of gas, the expected recovery from the sand ranges around 20,000 bbls. per acre.

FUTURE DEVELOPMENT

The final development of the field will require the drilling of about 230 wells under the 10-acre spacing pattern. Although the allowable at present is set at 125 bbls. per well, it should not exceed 9,000 bbls. per day for the entire field when fully developed. At that rate, placing the per well allowable at approximately 40 bbls. per day, about 14 years' production will deplete the field. It is probable that, an the advanced stages of production in the sand, a repressuring plan will be effected, as the structure of the formation lends itself ideally to that practice.

The reservoir pressure in the 5,800-foot sand corrected to —5,750 feet was originally over 2,600 pounds. This condition coupled with the high percentage of gas present in solution, will allow a high recovery if drilling and production continue in the present orderly manner. Operators realize the importance of regulating production and in keeping the gas-oil ratio at a minimum, as illustrated by the general practice of setting oil string on the bottom of the sand section taken, and perforating in the lower 10 feet for production.

The crude recovered from the 5,800-foot sand has a gravity of 39.7 degrees A.P.I. corrected. The latest quotation was $1.22 per barrel at the well. Approximately 600 feet of gas is held in solution at the reservoir pressure and temperature which approximate 2,650 pounds and 170° F. respectively. The gas produced with the oil has a gasoline content not exceeding three-quarters gallon per 1,000 feet. This fraction while small is the greatest yield shown in any of the gas from the other sands, as they are mainly very dry.

The presence of a restricted sand at 5,725 feet is believed apparent in the north part of the field. It is of lenticular nature averaging 25 feet in thickness and producing crude similar to that in the regular 5,800-foot horizon.

In the vicinity of Clarkwood townsite, a sand at 4,400 feet has been extensively developed in the past several months. Although often termed the Clarkwood field, the area is a part of Saxet. The structure consists generally of two sands of a fairly uniform nature, separated by a shale break of about 10 feet. In the western section of the structure the upper sand is usually gas bearing, while oil is encountered in the lower section. At points in the eastern portion, however, the oil sand is the lower section, overlain by a water sand above the shale break. This condition would lead the unexperienced operator to expect a failure, upon striking the water sand, without knowledge of the pay beneath. An exception to the uniformity of the two sands was found in the townlot drilling at Clarkwood, where the upper sand is missing in some of the tests.

The average thickness of the 4,400-foot sand is 12 feet. The gas-oil contact where gas and oil occur in the same body is little better defined than in the 5,800-foot sand, it being fairly indefinite in both bodies. The structure is encountered slightly higher on the west side of the field, due it is believed to minor faulting.

The oil in the Clarkwood sand has a gravity of about 28 degrees A.P.I., decidedly lower than the Frio production found to the north and east. Closed-in casing pressures of 900 to 1,500 pounds are encountered in completing well, with the working pressure on the tubing of flowing producers ranging from 400 to 900 pounds. This sand has been developed in all directions from the town of Clarkwood, particularly to the east, where it has been proven for about a mile.

The 4,800-foot sand in the field, which is producing about 50 wells, is thinner than the sand bodies of either the 4,400 or 5,800-foot horizons. The section is irregular with numerous shale breaks; the average thickness ranging around 6 to 8 feet. Casing pressures on wells producing from this sand average 1,500 pounds while tubing pressures are recorded at about 1,000 pounds. The gravity of the crude from this horizon is still lower than in the preceding sands, showing 25 degrees.

Recent developments which have opened the prolific deep production in Saxet indicate the possibility of further production in still deeper sands, a premise which will require additional exploration to substantiate.

A test being drilled in the Saxet field by Allied Drilling Co. for the Southern Minerals Corp. Heavy equipment is used in the field, with special emphasis on the control equipment for dealing with high pressures encountered in sands of the field

C. Gonzales de Juana has joined the Compania Espanola de Petroleos in eastern Venezuela as district manager retiring from his former affiliation as petroleum geologist for Standard Oil Company of Venezuela.

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Geology of White Point Field Requires Careful Drilling

There are several oil and gas fields in the lower Texas Coastal region in the area tributary to Corpus Christi, of which the White Point field is the oldest. The first commercial gas well was drilled in this field by Gulf Production Co. in 1916, although the first well in the field was drilled about 1907 by Randolph Robertson, and blew gas for several days from a total depth of 400 to 450 feet.

According to W. Armstrong Price, well-known geologist of Corpus Christi, hydrogen sulfide in gas seeping from a spring or water hole at the west side of the White Point peninsula led to the exploration for oil, according to the theory that a salt dome might be found. Disseminated grains of sulfur have been found in the outcrop of sandy sediments on the west side of the peninsula and by the end of 1935, 20 acres of oil and gas and 3,865 acres of gas-bearing formations had been developed, and while these producing formations form a dome drilling to a total depth of 7,211 feet and into the Frio formation has failed to develop evidence of a salt dome as first suspected.

The producing horizons in the White Point field are the Lagarto and Middle Oligocene, found at depths of 2,375 feet for the gas sand and 4,902 feet for the oil zone. The top of the productive zone is found at 4,880 feet. Many wells have been drilled in this field and Doctor Price reports that between 1913 and 1926 approximately 30 wells were drilled for oil without success. High-pressure gas was encountered in some of these holes and several spectacular gas blowouts resulted. Two of the wells cratered badly and considerable trouble was experienced in shutting them in.

Several gas sands were found around 3,840 and 3,880 feet. Two wells drilled during this period seemed to show pressures greater than hydrostatic; in one well there were sands in the open hole deeper than in the hole from which the gas was supposed to be coming, and in the other there is no record of the gauge having been tested after years of use.

Beginning about 1922, the Moody-Seagraves organization acquired leases and drilled four wells, the deepest to approximately 4,100 feet. Two of these wells showed oil, and at least two showed gas. At that time no market for the gas existed. Little was known about the possibilities of producing gas from semiconsolidated sand and much trouble was experienced in attempting to complete these wells. However, during that period, W. L. Pearson, of Houston, and associates had completed two gas wells in the Saxet field across the bay and were selling gas to the city of Corpus Christi.

In 1927, encouraged by the production of gas in the Saxet field and by the completion of gas wells at Refugio and Edna, the Moody-Seagraves group and the Houston Oil Co. were completing their plans for piping gas to Houston. W. L. Pearson and S. R. Merrill, of Houston, acquired leases at White Point and agreed to operate these and the holdings of the Houston Gulf Gas Co. for the Moody-Seagraves interests and to develop a daily production of 25,000,000 feet by January 1, 1928. By the end of 1927 a total gas production of approximately 45,000,000 feet per day had been developed from Saxet and White Point fields and approximately 40,000,000 feet went to Houston daily from the White Point field alone, being delivered through two pipe lines.

In 1930 the Saxet Oil Co. contracted with the fee holders at White Point to drill several deep tests for oil. The first of these locations was made by W. Armstrong Price on the White Point Oil & Gas Co. fee, Rachal ranch, the well being known as No. 17 Rachal. This location was in the center of the developed gas area and presumably high on structure as defined by the gas sands. Oil had previously been discovered in the South Texas Gulf Coast region at places within 30 miles of the coast at Kingsville, Refugio and Saxet, at distances of 35, 30 and 4 miles, respectively, and all approximately the same distance from the coast as White Point.

On November 11, 1930, No. 17 Rachal produced 25 bbls. of "pipe line oil" from sand between 4,878

One of the early tests in the Saxet field, which blew out and cratered charging the shallow sands with high-pressure gas. Blowouts of this nature are responsible for the present dangerous conditions encountered in drilling Saxet

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and 4,892 feet. The well was deepened to 4,902 feet and on December 2, 1930, produced 124 bbls. of oil and 24,000,000 feet of gas through a separator without showing water. Screen was set from 4,878 to 4,902 feet, the formation being sand with sandy shale. Closed-in pressure at the 4,892-foot depth was 1,200 pounds per square inch at the casinghead. At the 4,902-foot depth, while the well was blowing through the separator, pressure on the casing was 1,580 pounds and on the tubing 1,250 pounds.

The well was connected with the gas pipe line system and the gas flow choked to 4,000,000-6,000,000 feet per day. The well then produced 50 bbls. of oil. A distillation test of the oil follows:

Oil—	Gravity	Per cent	Initial boiling point	End-point	Flash	Fire
Crude	31.5	100	...	...	...	...
Naphtha	46.5	33.6	220	412	...	...
Gas oil	31.1	30.0	...	...	190	210
Lub stock	19.5	36.0	...	...	310	340
Loss	...	0.4	...	...	...	...

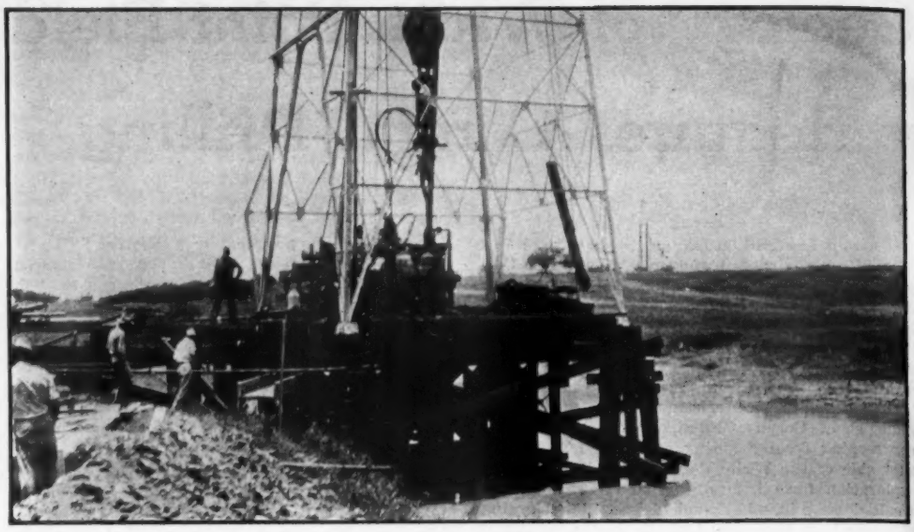
On December 12, 1930, the flow of oil and gas was stopped with mud, screen pulled, and the well deepened, but no lower oil-bearing sand was found. Gas sands were cored from 5,259 through 5,273 feet and from 5,769 through 5,776 feet, and the well was plugged back to the original oil and gas sand at 4,874-4,903 feet, with 20 feet of screen. The total depth of this well was 6,000 feet.

The stratigraphic distribution of the oil showings seems to be as follows, although there is some doubt as to the position of the Miocene-Oligocene contact in the White Point field.

Age of formations	Number of oil-bearing horizons
Lissie-Reynosa, nonmarine	Two.
Miocene, nonmarine.	Eight. Discovery sand in Saxet field in Miocene (?) Catahoula.
Oligocene, marine ..	Two. Discovery sand in White Point field may be at top of Frio Oligocene.

The drilling demonstrated that careful technical supervision is needed for the efficient production of oil at White Point and Saxet. The sands are lenticular. Water sands closely overlie some oil sands at Saxet. After a producing sand is found, careful coring is needed to determine the best position for casing and screen. First-class cementing is necessary, and coring of cement plugs is desirable. Judging cores of sands for production is difficult because of the different gravities of the oils, with their different color, odor and volatility. The presence of much dissolved calcium carbonate in many sands necessitates prompt inspection and tests for lithologic character and porosity, because cores harden in the air. Subsurface studies are made more difficult by the absence of reliable key horizons above the Discorbis and Heterostegina foraminiferal zones of the Middle Oligocene. These are problems which necessitate close technical attention.

The high gas pressures indicate that enough strings of casing must be set to prevent migration and leakage of gas from one bed to another in order to protect the oil and gas reserves and to reduce blowout hazards. The difficulty of judging cores for oil production indicates that screen must be set for adequate tests of most sands showing oil, being particularly necessary in the deeper sands where drill-stem testers fail to hold.



Drilling in the bed of Chiltipin Creek, Plymouth field, which upon surveying, was found to be below sea level, tidewater land and therefore leaseable from the state of Texas

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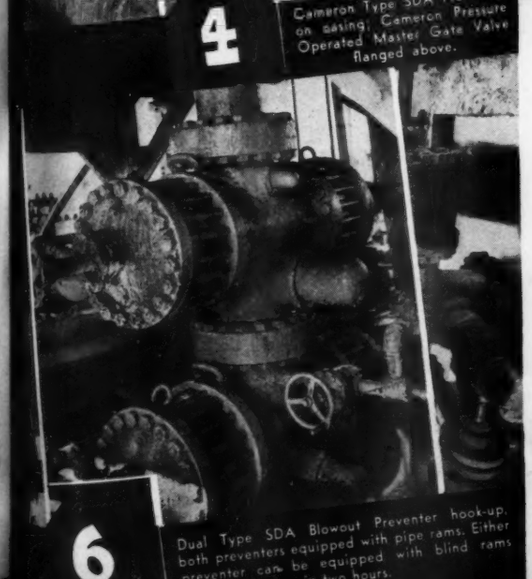
3 Complete pressure operated hook-up, consisting of Type SDA Preventer on casing; pressure Operated Master Gate flanged above; pressure operated flow-line valve.

4 Cameron Type SDA Preventer on casing; Cameron Pressure Operated Master Gate Valve flanged above.

5 Cameron Type SDA Preventer flanged above manually operated gate valve.



6 Dual Type SDA Blowout Preventer hook-up, both preventers equipped with pipe rams. Either preventer can be equipped with blind rams in two hours.

In the Corpus Christi District, as in all other Gulf Coast and Southwest Texas areas where 'sudden' and treacherous well pressures are the rule, Cameron full pressure operated Blowout Preventers and Gate Valves are doing a 100% job in bringing-in 'Tame' the wells entrusted to their protection.

Instant opening and closing of rams and valve gates by means of an *enclosed fluid pressure system;* self-feeding ram packing elements which seal instantly against the highest well pressures; freedom to rotate and spud drill pipe safely for long periods of hours through closed rams while circulating to kill kicking well pressure; self-centering rams which automatically center the pipe in the rams to assure positive closure; independent ram closing and locking screws; recessed ram shoulders which hold pipe up or down when rams are closed . . . . these are but a few of the outstanding reasons why Cameron Type SDA Pressure Operated Blowout Preventers, and Cameron Pressure Operated Gate Valves, have become No. 1 Standard of the world for completely dependable blowout prevention.

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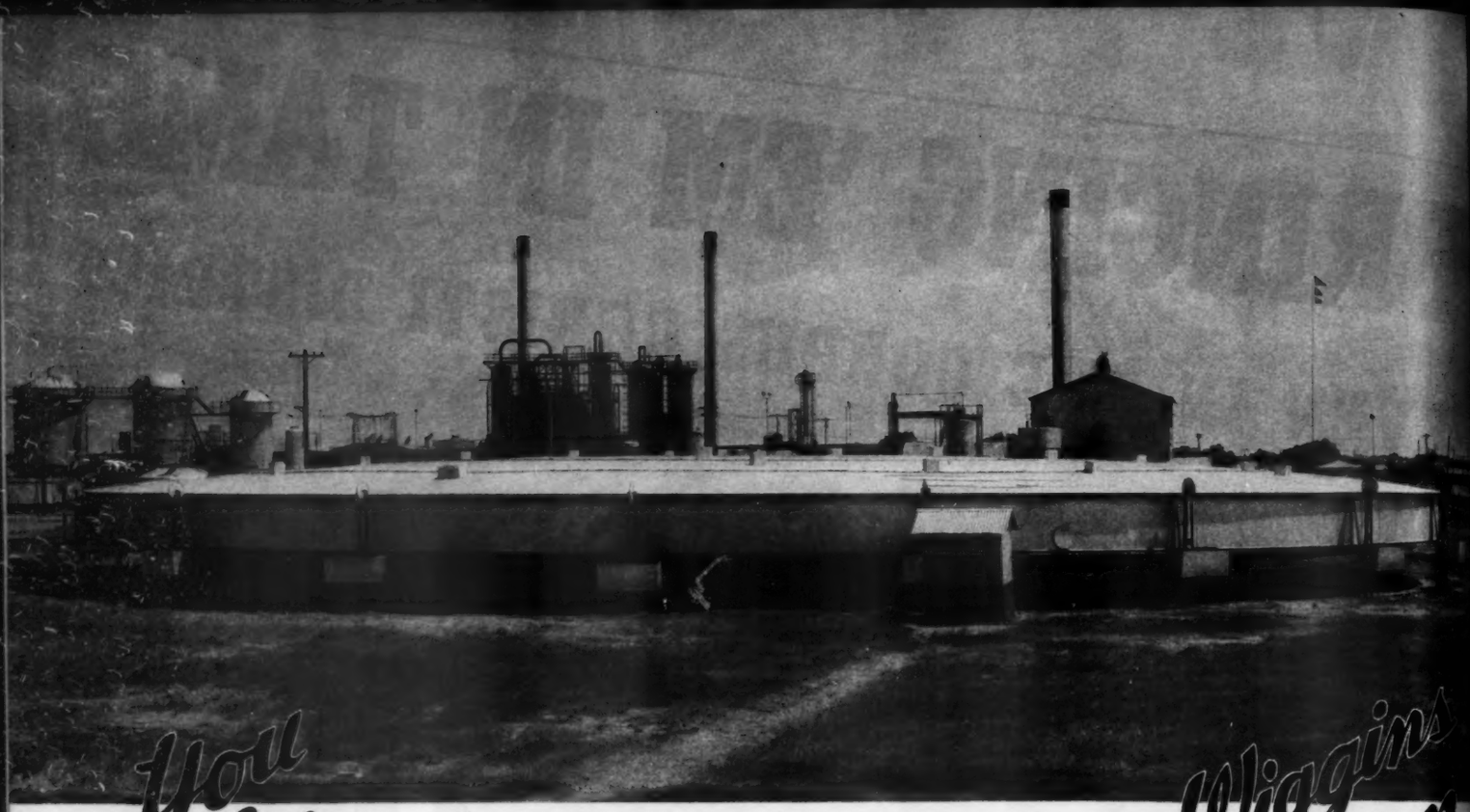

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The Wiggins Balloon shown here is installed at the Wichita Falls, Texas, refinery of the Continental Oil Co. It is 150 ft. in diameter and has 150,000 cu. ft. capacity. Connected to it are 24 gasoline tanks and several natural gasoline tanks—the latter operating at 5 lbs. pressure and venting into system only when that pressure is exceeded. The two views below show the position taken by the Balloon when filled with vapor and when nearly empty.

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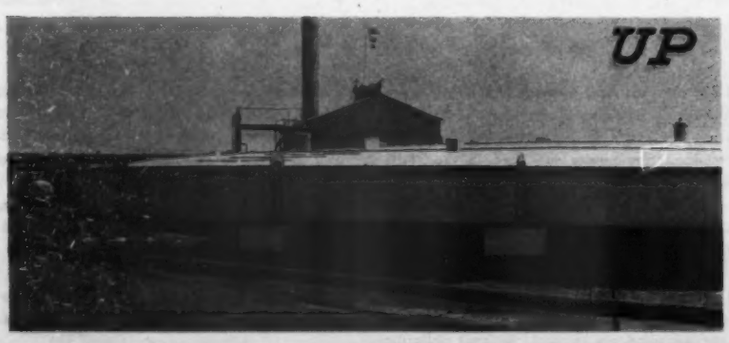

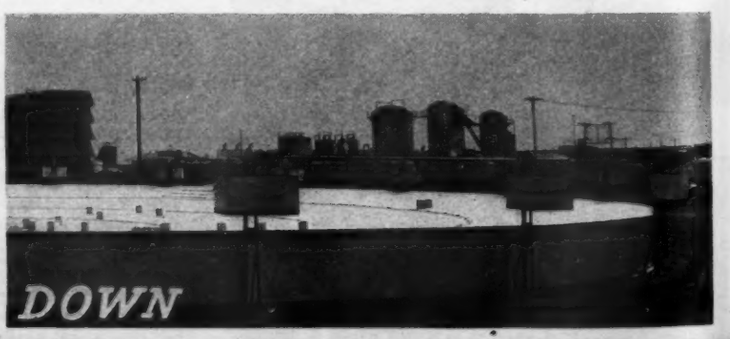

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Going in the hole on one of the deep tests in Saxet. This test is drilling to the 5,800-foot sand, one of the deepest producing in the section

Record of Rapid Expansion

CORPUS CHRISTI, Tex., Aug. 17.—Although the immediate vicinity of Corpus Christi saw exploration shortly after the beginning of the century, the history of extensive oil development in the area deals primarily with the past two years. Six of the eleven fields now producing in the district were brought in since 1934, and of the five older fields, only Saxet which has been considerably extended recently, shows any importance in the production picture today.

Total estimated accumulative production in all 11 fields of the area to July 1, 1936, is 9,400,000 bbls. (Table 1). Of this figure, 3,868,000 bbls., or over 40 per cent, was produced in the first six months of 1936. Activity at the present time is the highest in the history of the section, and the possibility of considerably increased production looks favorable from the recent discoveries of new fields and producing horizons.

Operators were first attracted to the section by a high area of land called White Point, lying on the north edge of Nueces Bay, across from the city. The terrain showing northward drainage and the presence of sulfur crystals indicated a structure, and in 1902 Randolph Robertson drilled a 400-foot test before losing the hole and abandoning it. Further activity lagged for several years, until 1911, when the White Point field was opened by White Point Oil & Gas Co. No. 1 Rachel. This well produced gas from 1,900 feet. The discovery incited the development of the field, and the history of drilling in that area is filled with accounts of many blowouts from the high pressure gas sands encountered on the structure. Oil production was subsequently found in the field, but its importance has been negligible.

SPOTTY DRILLING

Spotty drilling over a period of several years succeeded in opening a few small fields in the area. Kingsville in Kleberg County was discovered in 1928. Agua Dulce first produced gas in August of the same year, and the first wet gasser was brought in during late 1930 when the Houston Oil Co. No. 1 Comstock was completed making approximately 100 bbls. of distillate per day, together with several million feet of gas.

The Houston Oil Co. was active in the area, beginning the early development of Agua Dulce and also of Saxet. The first gas well of the latter field was completed in 1922, but it was years later that oil production was discovered. Erratic development continued in that area for several years, and many dry holes were drilled. The revival of activity in Saxet drilling which now makes it the most active spot in the area, is the result of a drilling program of some of the major operators in the field. Southern Minerals Corp., Houston Oil Co., Conroe Drilling Co., Morgan Gulf Oil Co. and other companies have opened and drilled several new sands in the field, raising it to first importance in the area. The new deep sand at 4,800 feet was extensively developed in late 1935 and early 1936, and the 4,400-foot sand in the vicinity of Clarkwood has been drilled for many producing wells. The discovery of primary importance, however, was made in February, 1936, when Benedum & Trees Oil Co. recompleted the old Holliday No. 1 Griffith at a total depth of 5,839 feet. Because little was known at that time of the producing possibilities of the Frio sand in the field, it was not until more than two months later, that a second

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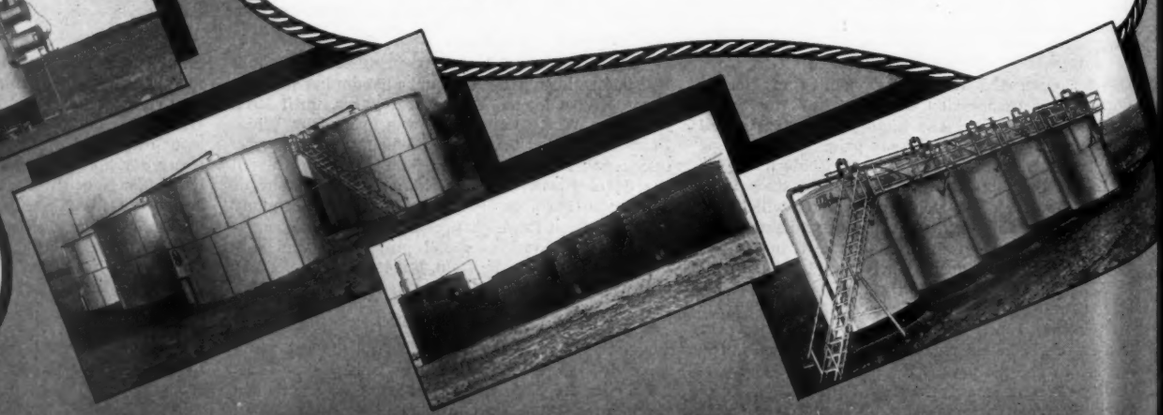

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completion in the sand made by Morgan Gulf Oil Co. revealed the presence of a producing horizon of considerable importance. Subsequent development of the new horizon was rapid, and at present, the structure has been defined, and is calculated to hold one of the largest oil reserves in Southwest Texas.

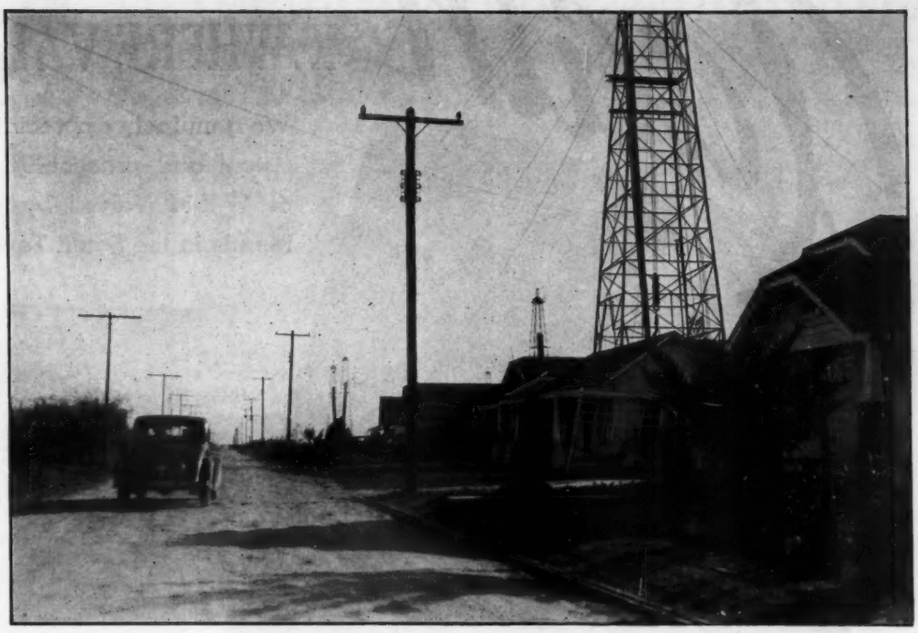
PLYMOUTH FIELD

Meanwhile, development of other fields was taking place elsewhere in the Corpus Christi district. The year 1935 began the trend of greatest oil discovery. In April of that year, Plymouth Oil Co. started a test on the Welder ranch several miles east of Sinton, which marked the discovery of the Plymouth field. The first producer was bottomed in the Plymouth sand at 5,500 feet. Its completion was followed immediately by the drilling of a test by Heep Oil Co., opening a second sand about 100 feet lower. This Heep sand lying in the Frio section is now producing the greater part of the wells in the field. Subsequent operations in Plymouth have opened to production a third deep sand at 5,900 feet and a recently discovered 5,880-foot horizon.

The Plymouth field now comprises 88 wells, double the number producing at the first of the year. Potential production has reached 17,000 bbls. per day, and the total accumulative production to date approaches 2,000,000 bbls. Extent of the structure has not yet been determined, as the field is consistently being extended to the south, north and northeast. The expected recovery of oil, based on indications of the sand body in the field at its present stage of development is placed at about 23,000 bbls. per acre. This places the probable amount of recoverable oil in excess of 43,000,000 bbls.

OTHER FIELDS

Late 1935 and early 1936 saw the discovery of additional producing areas; Baldwin, Clara Driscoll, Corpus Christi, or Saxet Heights, and Taft. Baldwin is a small producing area south of the Saxet field, consisting of eight producing wells making an average allowable of 100 bbls. per day.



When townlot drilling was at its height in Saxet Heights

This field has been inactive for several months.

The Clara Driscoll field was opened late in 1935, but development of the area has only recently shown any progress. The second test drilled offsetting discovery failed to make a producer, and further drilling lagged for several months. Recently, however, the area again was brought to the attention of operators when a test being drilled by O. W. Killam about 1 mile southwest of the discovery well, blew out in sand at 3,293-98 feet and ran wild for several days making an estimated 2,000 bbls. of oil daily. Later capped and recompleted in a shallow sand for a gasser, the test was followed by a second gas completion. Activity in the field incited by this event is expected to bring early development.

The Taft field, lying south of Plymouth in San Patricio County, experienced the same lack of interest at its beginning. The discoverer, George E. Smith failed to find production in a second test offsetting the first. Two other tests were drilled and abandoned in the immediate area, before production was finally found in a higher sand. The discovery sand is a Greta sand, encountered at

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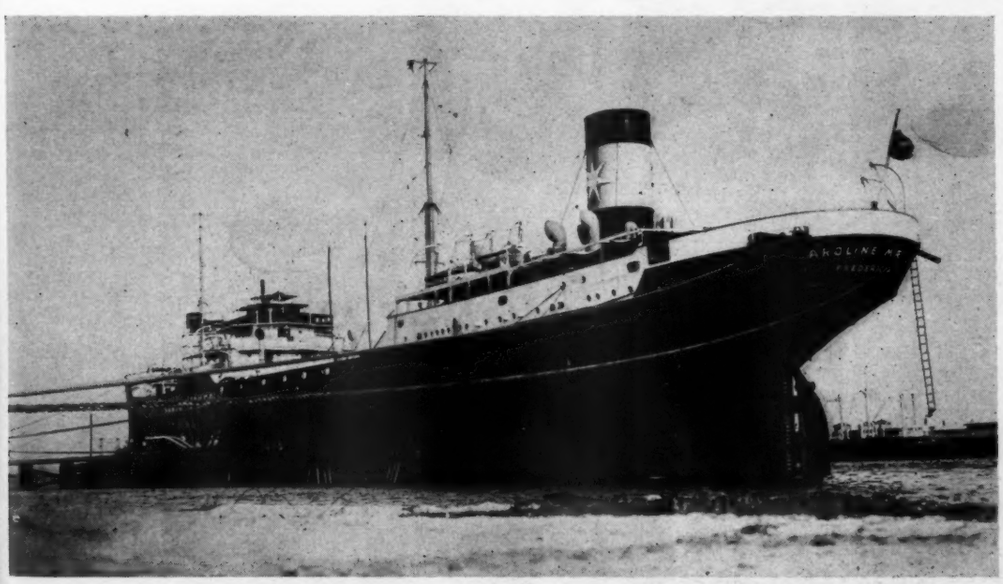

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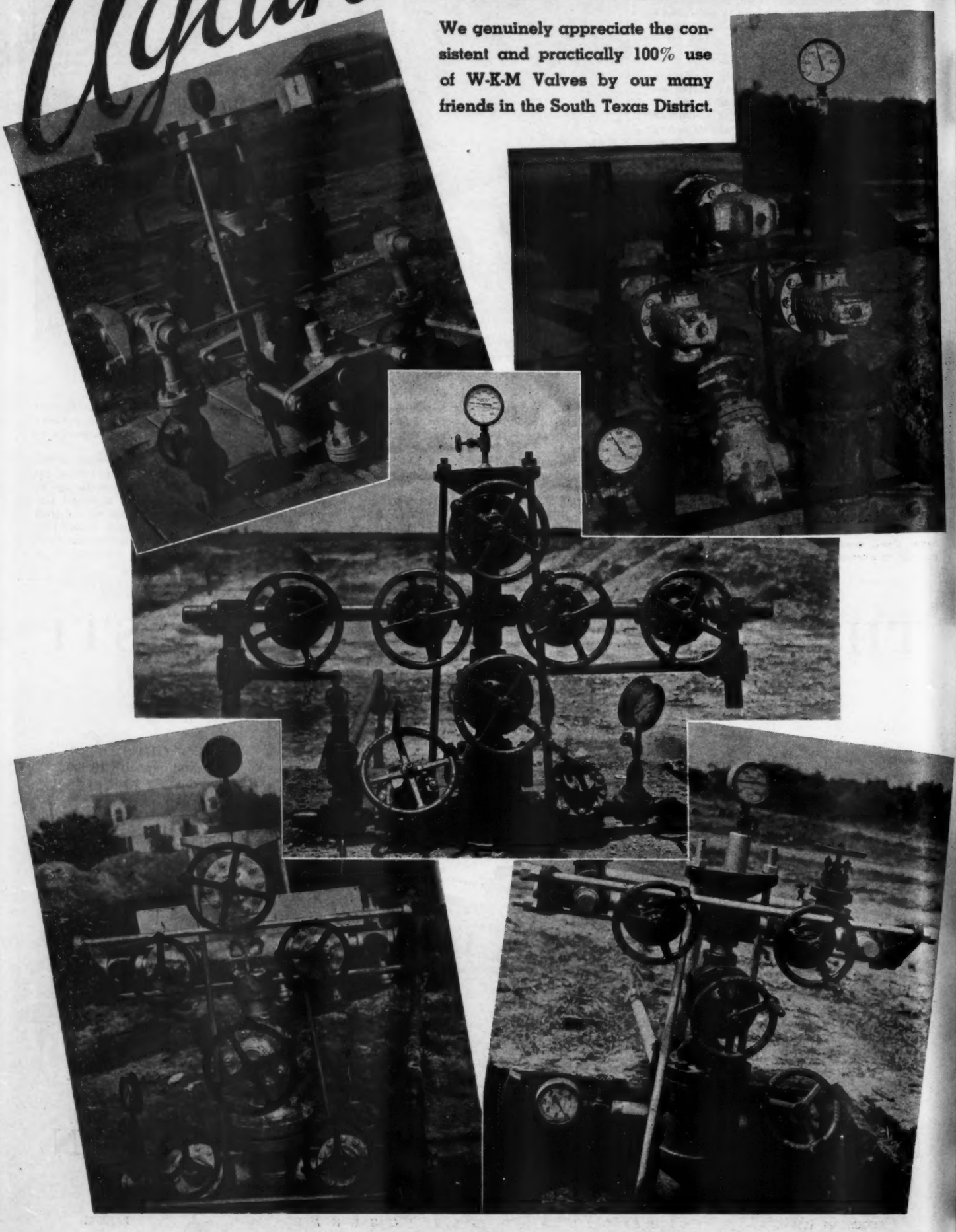
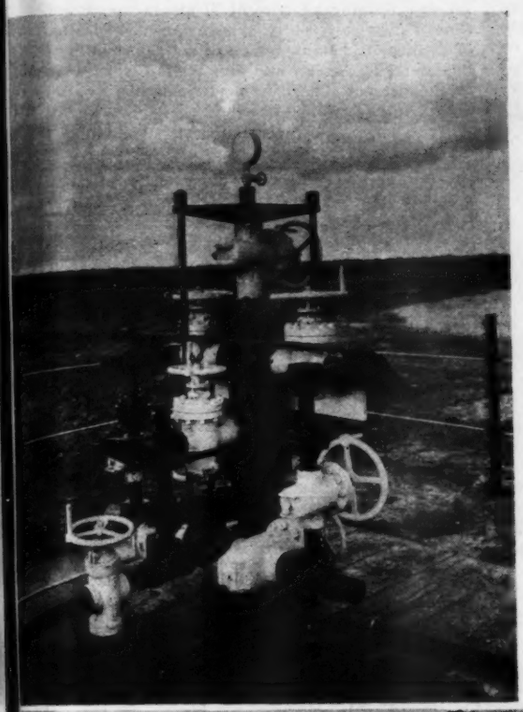


W-K-M THROUGH-CONDUIT LUBRICATED GATE VALVES PREDOMINATE



In the Corpus Christi section of South Texas, where high pressures are an outstanding factor in the selection of equipment, you'll find W-K-M through-conduit LUBRICATED Gate Valves wherever you turn. You don't have to look for them. The Christmas-trees reproduced here were photographed at random from the hundreds equipped in this district with W-K-M Valves.

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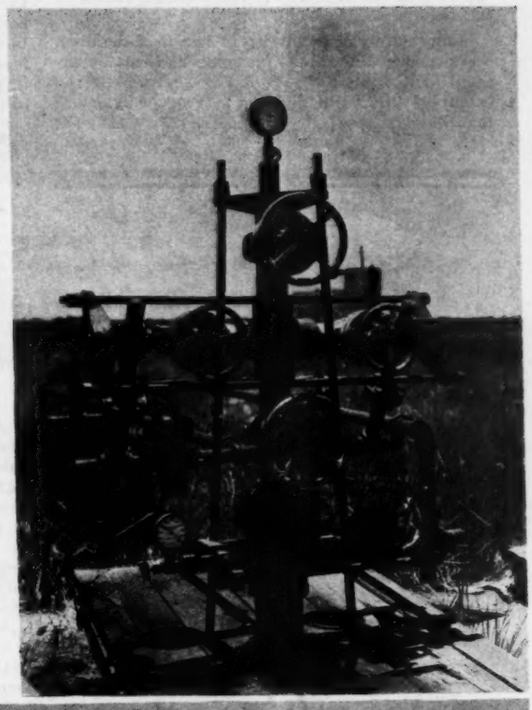

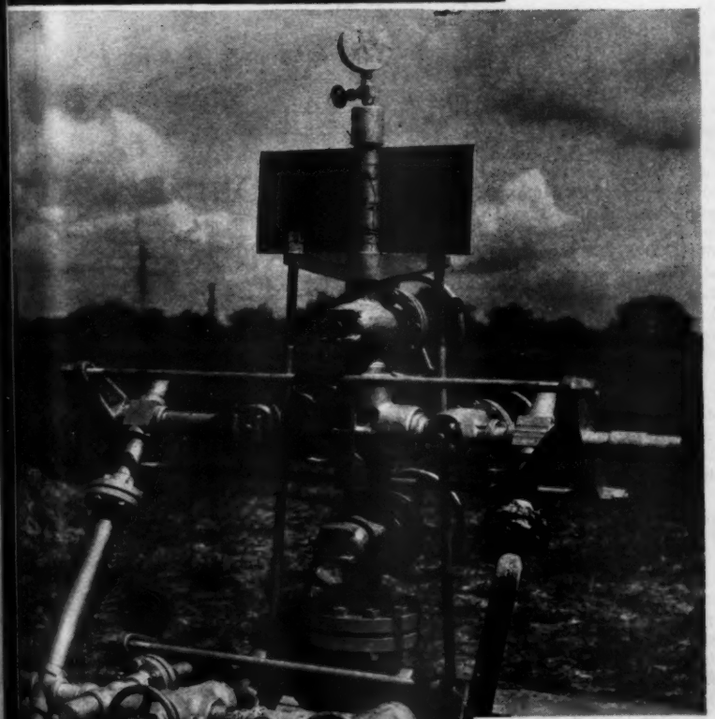

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about 4,900 feet. Operators in the field are now drilling twin wells to the deeper sand and that later opened at 3,900 feet.

SAXET HEIGHTS

The Saxet Heights field on the outskirts of Corpus Christi was discovered in late October, 1935, by J. K. Culton. The new area was termed the Corpus Christi field by the Texas Railroad Commission, and the San Antonio Geological Society named it the Saxet Heights field. Both names are used today. Culton No. 1 Baldwin was completed in a sand at 4,069-73 feet, later found to be a Catahoula formation. This test was followed by others drilled by the same operator, and by the first of the year four wells were producing in the field.

Immediately a drilling spurt began in the area, occasioned by the influx of a number of small operators drilling in the subdivided sections. At the height of this drilling, later in the spring, more than 35 rigs were active in the field. By August, 133 producers had been completed and approximately 15 rigs were still drilling.

The multiplicity of landowners in the subdivisions comprising the field made leasing of large blocks practically impossible, and gave entry to the numerous operators, at the present time numbering over 30. Offset drilling gained in momentum as the field developed, with wells drilled on leases ranging from the 10-acre spacing provided in the rules down to tracts of less than one acre in size.

TABLE 2—MAJOR FIELD OPERATIONS—CORPUS CHRISTI DISTRICT

Field—	Depth (feet)	No. of wells Jan. 1, 1936	No. of wells Aug. 1, 1936	Potential (B.P.D.)	Choke	Av. per well allowable	Field allowable	Active rigs	Gas-oil ratio
Saxet Heights	4,100	4	133	30,000	est.	59.6	7,939	15	10,000
Old Saxet	2,300–5,850	42	45	5,000	est.	38.2	1,721	1	3000
New Saxet shallow	4,000–4,450	7	41	6,270	5/32"	81.4	3,336	6	3,000
New Saxet deep	4,800	36	50	24,720	5/16"	88.7	4,437	0	3,000
Saxet Frio	5,800	0	30	5,350	1/8"	125.0	3,750	20	3,000
Plymouth	5,500–5,900	44	88	17,000	9/64"	115.0	9,920	9	2,000
Taft	3,900–4,900	1	10	2,000	5/32"	100.0	1,000	5	2,000

TABLE 1—TOTAL ACCUMULATIVE PRODUCTION OF FIELDS IN CORPUS CHRISTI DISTRICT JULY 1, 1936

Field and county—	Prod. (bbls.)
Agua Dulce, Nueces	202,312
Baldwin, Nueces	202,950
Bentonville, Jim Wells	9,673
Clara Driscoll, Nueces	28,198
Kingsville, Kleberg	584,000
Plymouth, San Patricio	1,980,787
Saxet, Nueces	5,508,477
Saxet Heights, Nueces	704,764
Sinton, San Patricio	62,717
Taft, San Patricio	55,851
White Point, San Patricio	60,290
Total	9,400,023

A study of the structure and pressure conditions of the field illustrates the overdevelopment which has taken place. The oil sand averages less than 6 feet in thickness and is believed productive throughout an area of about 900 acres. This makes an average of less than seven acres per well at the present stage of development. Total production of the field to date exceeds 725,000 bbls., and the estimated amount of crude in the reservoir is placed at 2,500,000 bbls.

DROP IN PRESSURE

Originally, the pressure in the field was 1,800 pounds, but a survey made early in August showed a drop in pressure to 1,550 pounds, due mainly to the large production of gas together with the oil. The west portion of the field is overlain by a thick gas cap, which has complicated the successful completion of many producers in that section. Production has ceased in a few of these wells already.

Large gas production has led to the adoption of a gas-oil ratio of 10,000 feet per barrel of oil. The gas is dry, consisting almost entirely of methane and ethane, and is vented in flares which make the field visible for a range of 50 miles at night. The present allowable fixed for the field places a top production per well of 75 bbls., of which 38 bbls. is based on potential, and the remainder is allowed at the rate of 3.7 bbls. per acre. This represents exactly half of the allowable given the wells producing at the first of the year. In May the top figure per well was cut from 150 bbls. per day to 100 bbls., on June 21 it was again cut to 61 bbls., and on August 1 it was increased to its present allowable of 75 bbls., or 7,939 bbls. for the entire field. Due to the drilling on small tracts, and the high gas-oil ratio of some of the producers, the average per well allowable was 59.6 bbls. on August 1.

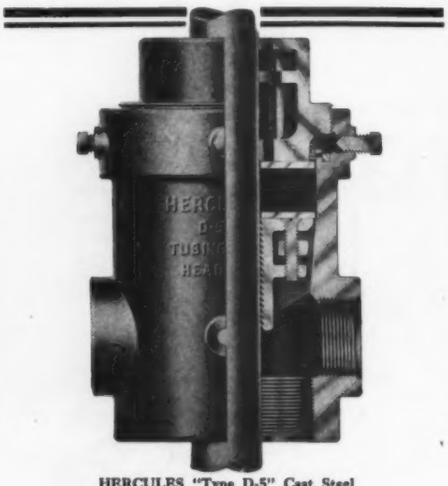
At its present status, with production limited to the 4,100-foot horizon, the field will probably fail to produce enough oil to cover the overall cost of drilling the wells. The average cost of drilling is about $21,500. However, the outlook is somewhat brightened by the possibility that production may be found in deeper sands, particularly the 5,800-foot Frio sand which has added such importance to the Saxet field. Although some deeper drilling has been carried to that horizon without success, authorities believe that the tests so drilled were located off structure at that depth, and that the Frio sand, if existent on the structure, has yet to be tested.

Development of this field has exerted a pronounced though relatively transient effect on Corpus Christi. It is primarily responsible for the present shortage of living quarters, the establishment of a considerable supply trade, and the general activity of the city.

FUTURE DEVELOPMENT

The wave of wildcatting which has accounted for the opening of several fields in the Corpus Christi district recently, is showing no indications of falling off. Many tests are actively drilling in San Patricio, Nueces and Jim Wells Counties, and at the present time, two new fields are awaiting initial development.

One which shows encouraging possibilities is



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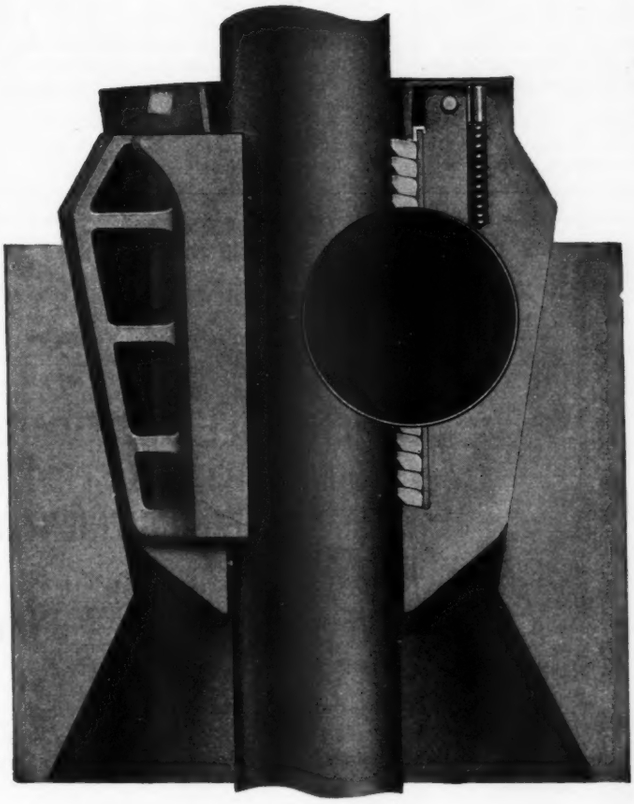

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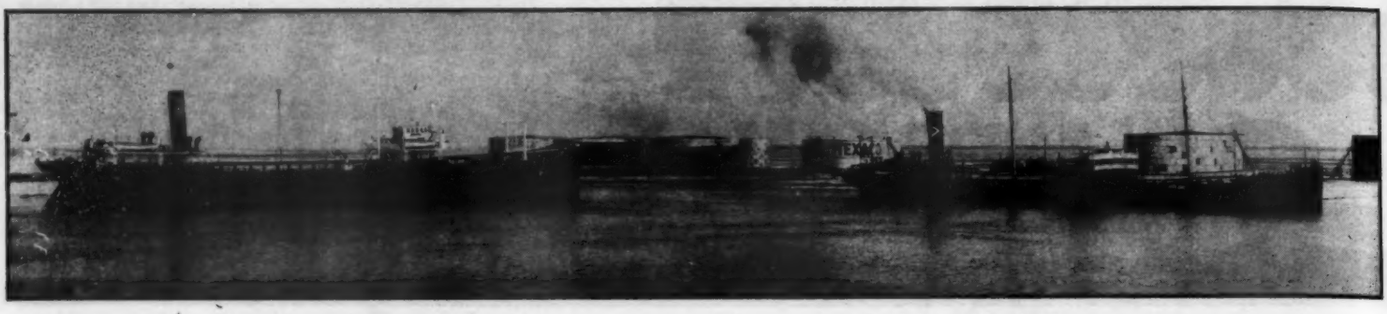

The busy harbor of Corpus Christi, showing two tankers tied at the two oil docks now serving terminals in the main turning basin. The volume of traffic in crude and refined products is responsible for the building of a third dock to be located on the Avery Point turning basin

the new Flour Bluff field located between the Cayo del Oso and Laguna Madre, southeast of Corpus Christi. The discovery well of this field was completed by M. F. Hurlburt and the Barnsdall Oil Co. early in July for over 550 bbls. per day initial production on a restricted choke. Gravity of the crude is 43 degrees A.P.I. The test is on a large block held by the two mentioned operators and the Humble Oil & Refining Co. Sand producing in the discovery well was encountered at 6,640 feet and has been designated as a Frio formation; the same type of sand producing in Plymouth and new Saxet. This discovery is rated of primary importance by operators of the general area.

Another potential producing area has been opened on the Aransas-San Patricio County line near Aransas Pass, and eastward across Corpus Christi. Discovered by the Buckingham Oil Co. upon completion of No. 1 McCampbell at 6,566 feet, the field shows as yet no considerable show of oil production, but is flowing approximately 100 bbls. of distillate per day, under a pressure of 2,200 pounds.

Bentonville, a field in Jim Wells County was discovered late in April by the Texon Drilling Co. and Lucey Petroleum Co.

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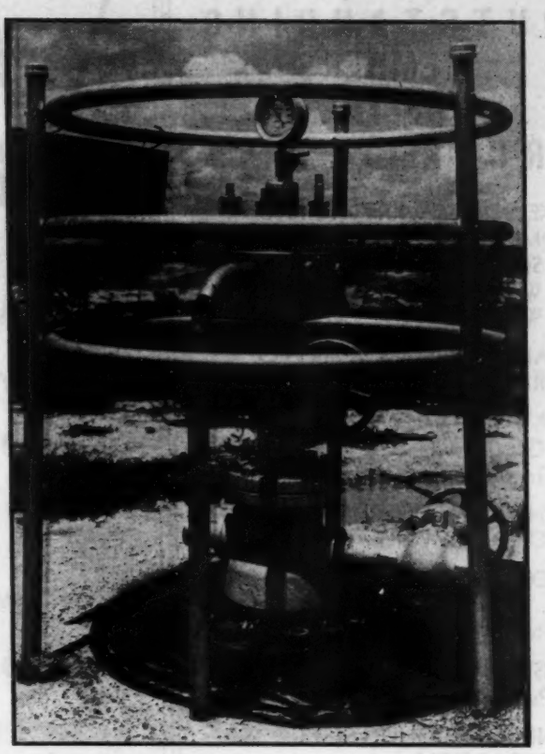
Special Precautions Used in Gulf Field to Avoid Blowouts

By NEIL WILLIAMS



New type of christmas tree used by Quintana Petroleum Co. on flowing wells. The block-like case, in which are the chokes and connections, replaces the heavy valves, crosses, tees, etc., of the conventional hook-ups.

A record of more than 40 wells drilled in succession without a failure and without a blowout has been set by Quintana Petroleum Co. in the development of the Quintana-O'Connor field in Refugio County, Texas Gulf Coast. As the field is located in a region in which high-pressure gas sands present a constant hazard to drilling operations, the record stands out as an achievement of especial note.

Opened in July, 1934, the field now is two years old. In this time, Quintana Petroleum Co., the sole operator in the field, has been carrying on a steady, conservative drilling program, in which production is being obtained in a 5,800-5,900-foot sand horizon. So far, there have been no dry holes, and all wells which have been drilled are flowing with working pressures average between 800 and 1,000 pounds.

From the beginning, Quintana Petroleum Co. has taken cognizance of the hazard of gas blowouts, common in the development of other fields in the Lower Gulf Coast district, and has exerted every precaution considered necessary to prevent the occurrence of such catastrophes in this field. As a result of these precautions the company has been successful so far in preventing any well from getting out of control.

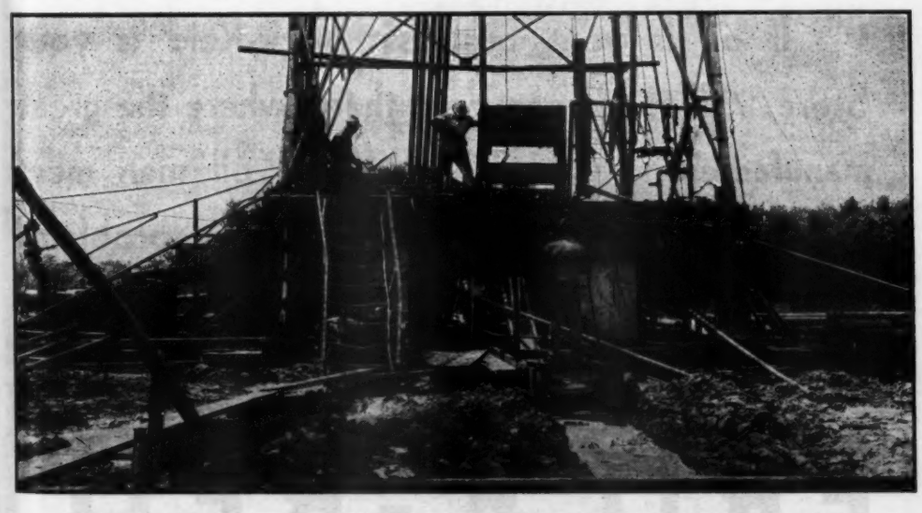
At the same time, this company has developed practices and special facilities which have resulted in efficient and economical operations in the field. In particular, the systematic procedure which has been followed has enabled the company to effect important savings in time and cost. This article, however, deals largely with practices followed by the company in preventing blowouts, other practices being reserved for a later article.

In the control of gas pressures encountered in the field, the company has directed its attention along three main lines, namely: (1) Drilling mud; (2) mechanical phase; (3) human element.

Emphasis first has been placed upon the necessity for proper conditioning of the drilling mud. While the mechanical phase and the human element are vital factors in the control of wells, effective drilling mud must be used to facilitate the holding of pressures in the formations while drilling. So effective has been the drilling mud used that at no time has the company found it necessary to have mud weigh over 10 to 10.5 pounds.

Uniformity of mud condition has been the chief consideration in Quintana's operations. Throughout the entire drilling time of a well, the mud is not permitted to vary more than a fraction of a pound from 10 pounds to the gallon, and at the same time the viscosity is maintained uniformly so low that the mud flows almost like water and can be handled by the pumps almost as readily as water.

Higher mud weights than 10 pounds to the gallon have been considered unnecessary in view of the fact that, except when abnormally high pressures are encountered in shallow sands charged from previous blowouts, there are no formational pressures capable of lifting a column of mud of this weight. So far no trouble has been experienced with shallow sands in this field but due to the proximity of blowouts which have occurred in the nearby Greta field it is likely these sands may have become charged, and extreme caution is observed in drilling through them.



Drilling well in Quintana-O'Connor field, Refugio County, Texas Gulf Coast, showing mud discharge line and short ditch and screen which traps cuttings. Also is shown one of the underslung type of drawworks and engines used in the field

Caustic soda and tannic acid are used as needed to control the consistency of the mud. These chemicals are mixed in a proportion of 25 pounds caustic soda and 35 pounds tannic acid for one 50-gallon barrel of solution. They are thoroughly mixed before being injected into the mud stream.

Native muds have been used exclusively in the drilling of all wells so far. After the first several hundred feet of hole, the formations make more than an ample supply of mud, and of a very desirable colloidal quality. In early development of the field, a central mud reserve pit was maintained, to which all surplus mud from any drilling well was pumped and saved for use in other wells if needed. Lines were laid from the pit to all new tests started and this mud was pumped to them and used until such time as the wells began to make sufficient mud of their own. More recently, however, the field has spread out to such an extent that the pumping of mud to and from wells has been impractical, and new holes are being started with water. Consequently, use of the central reserve pit has been abandoned.

To insure uniformity of the mud consistency, constant watch is kept of the mud on every well. The weight and viscosity are checked accurately at frequent intervals. However, the crews have become so proficient in the care and maintenance of the mud condition that it is seldom that special attention is needed to keep it uniform. In its course, the mud is discharged first into a short ditch and through a screen which traps and settles out all cuttings and undesirable mud material. From here it is passed to the settling pits and from there to the suction pits. Every precaution is taken that the mud is thoroughly mixed to the desired consistency before it is picked up by the pumps.

Considering the mechanical phase of blowout control, only the heaviest and most adequate equipment is used. From the time the surface casing is cemented until a well is completed, a well never is without blowout preventer control. Two preventers are used regularly in the hook-up to facilitate going in and coming out of the hole with the hole closed. The preventers are checked thoroughly for closing and greased each change of tour so that they are kept in working condition at all times. Each rig is equipped with two 14½ by 7½ by 18 mud pumps capable of building up sufficient pressure for any emergency. Steam for these is generated by two high-pressure boilers. Drilling equipment and derrick also are of the heaviest types to handle heavy loads.

In reference to the human factor, the company

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Your lawyer, your doctor, your architect or your engineer may carry largely in his mind and his own library the accoutrements of his business.

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has followed the practice of having only the most experienced men with the company in responsible places. Reflecting this policy, all drillers are men who have worked up from the bottom in the employ of the company, and who have learned through experience and long service with the company what the requirements and the practices of the company are. Consequently, the possibility of a well getting out of control through failure of a man not knowing what is expected of him is minimized.

In the drilling of the wells, 16-inch hole is started and carried to between 700 and 800 feet, where 10¾-inch casing is cemented to protect the shallower and less consolidated surface formations. This string is cemented with 250 sacks of cement which is sufficient to fill the annular space behind the pipe. From there the hole is reduced to 9⅞ inches, which size hole is carried to the sand where a 7-inch flow string is cemented.

Early practice in the field called for setting and cementing the 7-inch casing on top the sand and completing the wells in the conventional Gulf Coast procedure. More recently, however, the practice has been to run the casing through the sand, cement on bottom, and then complete the wells by the perforation method. In the cementing, 550 sacks of cement are used, the procedure being to pump 500 sacks of this cement to the bottom and up behind the casing, and when this has set 24 hours, pump the remaining 50 sacks down behind the casing through the top of the surface casing. This has insured a more adequate cementing job to minimize the possibility of later trouble with gas or water breaking in around the pipe.

For pumping the latter 50 sacks of cement, a special hanger was devised for the 7-inch casing, consisting of a head which fits down over the surface casing. Openings and lines off the side of this hanger permit the pumping of cement between the two casing strings.

With the cement plug drilled and casing perforated at the desired level, screen and tubing are run to complete the wells. The wells are produced through a new type christmas tree designed by Roy Cullen, who recently was killed in an oil field accident. Mr. Cullen was the son of H. R. Cullen, president of the company, and was production superintendent, as well as secretary of the company. The tree, which is a radical departure from previous types, has as its features simplicity and compactness, yet it is capable of handling the highest flowing pressures. It is contained in a small block-like case, and its use replaces the conventional elaborate hook-up of valves, crosses, tees and lines. It is connected on the tubing head just above the master gate as shown in the accompanying picture, and employs only one flow line. Machined in the block are two courses, one through each side, and in which the chokes are fitted. These open off a central course, into which the tubing of the well fits, and discharge into a common flow line. By means of valves, the flow of oil can be directed from the tubing through either of the two courses or sides of the block into the common flow line. When one side is closed, the choke in that side can be readily changed or repairs can be made.

Corpus Christi Improvements

CORPUS CHRISTI, Tex., Aug. 17.—Actual work on Corpus Christi's new $607,000 sewer improvement project was started as workmen began razing the old disposal plant.

Permits for industrial construction work featured the last week's list, including seven for a total of $49,500. The Eggleston Oil Corp. initiated the largest project of the week when it secured a $30,000 permit for construction of tanks and a heating furnace.

Permits for housing projects totaled 25, valued at $46,590, and included 14 for new homes valued at $32,180.

MORE THAN 100,000
UNIBOLT
ONE-BOLT COUPLINGS
in less than 4 years!

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Briefly, the basic mechanical principle used in all UNIBOLT Couplings is as follows: Seal is accomplished through interlocking tapered shelves, one set of shelves being made integral with one hub of the coupling, another set being made integral with the nut or outer member of the coupling. A single bolt, which is under initial stress only, draws these self-locking shelves into position, applying tremendous pressure on the seat and seal ring. Pressure at all points is automatically equalized, regardless of any misalignment in the shelves.

Ask your supply dealer, or write direct for fully descriptive folder.

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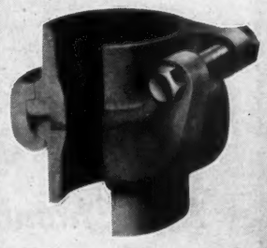
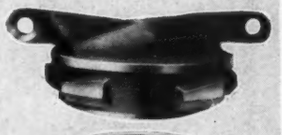
THORNHILL-CRAVER CO.
HOUSTON TEXAS

High pressure steel UNIBOLT, with replaceable metal seal ring, 6000 pounds test.



Medium pressure malleable UNIBOLT, with replaceable resilient seat ring, 1000 pounds test.



Steel UNIBOLT, with replaceable and reversible resilient seat ring, for 8" and 10" pipe, for use on pump suctions or pipe lines. 2000 pounds test. Available with blanking plug for compounding pumps or making dead-end lines.

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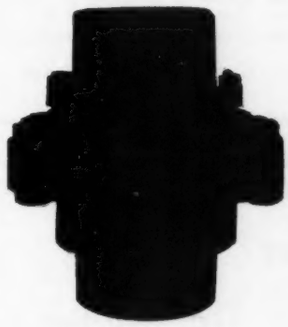

WHAT THE RECTORHEAD GIVES YOU:

Provides a means of hooking directly onto the head in case of a blowout, a means which has been successfully used. . . . Full opening insures against cutting off the head by sand blow . . . . . Two 3" side outlets provide ample opening below preventer rams for introduction of mud . . . . . drilling hazards are reduced because the well does not have to be opened before or after pipe is run . . . . . Male thread on bottom of head eliminates an extra threaded connection in the cellar . . . . . The head is repackable under high pressure. . . . . Load on the head is directly in line with the pipe, preventing lateral thrust and thus preventing collapse of pipe or rupture of head . . . . . Forged steel construction withstands impact of falling objects.

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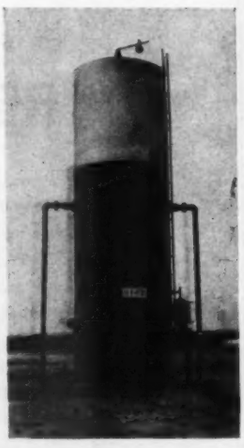

ABOVE: Note the ice formation on separator before OTIS Removable Bottom Hole Choke and OTIS Mixing Valve were installed. The operators of this high pressure well were considering an elaborate heating system.

ABOVE: Same separator, same day, after installation of OTIS equipment, which takes production from the casing head and introduces hot gas from the tubing to prevent freezing. The rate of withdrawal may be varied as desired.

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New construction now in progress at the plant of the Corpus Christi Refining Corp. Additional tankage is being erected to serve the refinery, and to constitute a terminal for deep-water shipping from a dock to be built near the plant of the Southern Alkali Corp., visible in the left background

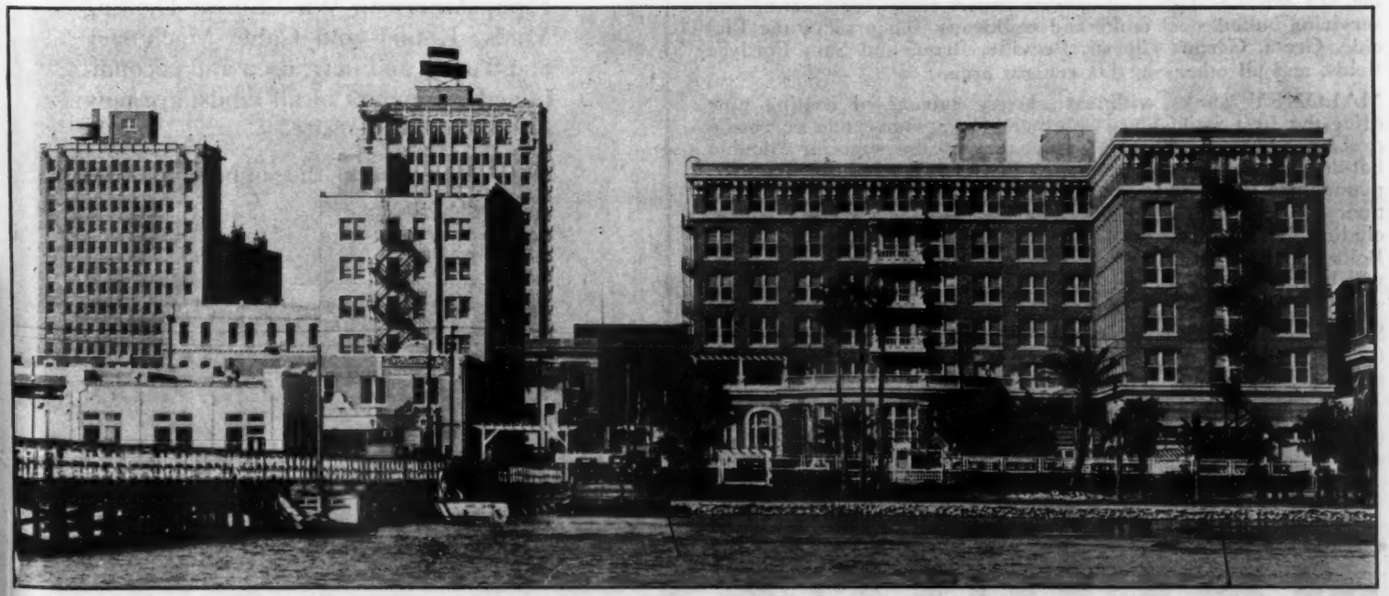
PIPE LINE, REFINING, SHIPPING

CORPUS CHRISTI, Tex., Aug. 17.—The business of handling a large portion of Southwest Texas oil production which falls to Corpus Christi and other adjacent points constitutes a rapidly increasing factor in the activity of that district. The present erection of refineries and terminals, laying of pipe lines and dredging of channels all typify the steady growth of Corpus Christi as a key oil city on the Lower Gulf Coast. As a natural outlet for production of interior fields, augmented by the flourishing fields in the immediate vicinity, the position of this city account for its phenomenal growth along these lines. Also to be considered is the reverse traffic in oil field supplies which incoming vessels are handling in greater tonnage figures each year.

The most significant progress in Corpus Christi in the past year has been the great gain in oil shipments, and the establishment of pipe line terminals in the area. An increasing traffic in outgoing crude and refined products has been under way from Corpus Christi docks ever since the first facilities were provided for such shipments. The total volume moved in 1935 more than doubled that shipped during the previous year, and oil cargoes clearing from the turning basin in the first six months of 1936, amounting to 5,772,129 bbls., have already exceeded those of the entire year 1935. Ingleside and Harbor Island shipments individually showed an overall decrease in 1935, but the volume moved in the first half of 1936 shows indications of a substantial gain for 1936 over each of the previous years. Of the total oil shipments leaving the Nueces County Navigation District which comprises the three points, the half-year mark in 1936 approaches the total volume shipped in other years, and points to a record period for the entire district.

HARBOR IMPROVEMENTS

Corpus Christi has shown the greatest percentage increase of oil shipments due primarily to the added facilities which the Navigation District has provided for oil shipping in the main turning basin. Early in February of this year, bids were accepted for the construction of a new oil dock to augment the overtaxed dock then handling all oil traffic. This new dock was shortly under



View of the waterfront of Corpus Christi

construction and its completion by spring offered double the loading capacity previously supplied.

OUTGOING OIL SHIPMENTS FROM NUECES NAVIGATION DISTRICT
(Barrels)

	1934	1935	1st 6 mos. 1936
Corpus Christi:			
Crude	2,134,189	4,580,516	5,753,166
Refined	.....	154,396	18,963
Total	2,134,189	4,734,912	5,772,129
Ingleside:			
Crude	.....	.....	407,437
Refined	1,522,223	1,462,834	691,761
Total	1,522,223	1,462,834	1,099,198
Harbor Island:			
Crude	20,481,687	18,745,634	12,323,898
Refined	172,732	99,824	.....
Total	20,654,419	18,845,458	12,323,898
Total	24,310,831	25,043,204	19,195,225

At the present time plans are under way for a third oil dock, and considerable dredging is to be done throughout the ship channel, thus affording service of the harbor to tankers of larger draft and tonnage. Bids will be opened by the U. S. government on August 24 for contracts to dredge the entire channel from Aransas Pass to the city. The channel from Port Aransas will be deepened to 34 feet and that leading from the main turning basin to Avery Point will be carried to a depth of 32 feet. Immediately upon the letting of this contract, the Nueces County Navigation Commission will accept bids for the construction of a third oil dock to be located about a mile west of the main turning basin at Avery Point. This water has previously been used solely by the Southern Alkali Corp., which maintains berthage for two vessels on the southern edge of the basin.

The foregoing developments are of far-reaching consequence for the future of Corpus Christi. Dredging and addition of further facilities for tanker traffic opens a large amount of acreage for prospective refinery sites and encourages the erection of more oil tankage in the immediate area. This movement is already evidenced by such activity now in progress.

NEW PIPE LINES

The first line to terminate at the new oil dock on Avery Point is now being laid from the Saxet field by the Southern Pipe Line Corp., an associate of the Southern Minerals Corp., important producers in that field. Work began August 15, and the line is expected to be in operation by the end of the month. It will be a 6⅝-inch welded line about 12 miles in length, with a gathering system tying initially into about 40 wells in the Clarkwood and Frio sand sections of the field. Pumps for the three stations in the field will be powered by natural gas combustion units, giving the line a capacity of 14,000-15,000 bbls. per day.

The new line will terminate about 4,000 feet south of the Missouri Pacific right of way near Avery Point, where the terminal is being erected. Two 93,000-bbl. tanks and one 20,000-bbl. tank are nearing completion at the terminal, and two 20,000-bbl. units are being added to the field system. The Southern Minerals Corp. plans to ship crude handled in the new line to foreign markets, where a contract has been acquired providing a new outlet for Texas crude.

Another pipe line from the Saxet field is approaching completion. It is being laid by the Potter Pipe Line Co., Inc., connecting production in that field with the terminal of the General American Tank Storage & Terminal Co. This 6⅝-inch line, also of welded construction, was begun the first week in August, and crude will be furnished for Coastwise shipment and for local refining purposes.

TERMINAL FACILITIES

In the past year the building of tankage in the vicinity of Corpus Christi has swelled the total oil storage capacity of the district manifold. The Texas Pipe Line Co., which operated one 80,000-bbl. tank on the main turning basin, have added 375,000 bbls. of storage to the terminal. Adjacent to the Texas Co. tanks, the Republic Pipe Line Co. has erected two 80,000-bbl. tanks for handling

Warehouse of Earl and Jack Calloway, Corpus Christi

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You'll get the kind of service operators in active fields appreciate.

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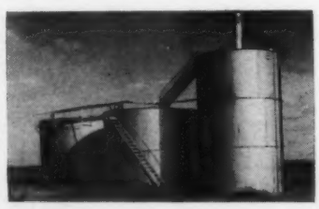
MALONEY Tanks with extra-heavy galvanized coating now offer the first satisfactory solution of the sour-crude corrosion problem. Sheets and parts are coated by the superior "double hot-dip" process with pure zinc, the spelter weighing over 7½ pounds per 100 pounds of steel. Coating is applied *after* fabrication, insuring that all edges including bolt holes are coated. Bolts are also galvanized, after which nuts are re-tapped.

Tank capacities 100 to 10,000 bbls. Stairways and walkways are sectional and meet any requirement.



MALONEY 750 Bbl. and 1,000 Bbl. Tanks equipped with MALONEY Stairways, Walkways and Stack, Texon Royalty Co., Clarkwood Field

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A complete new Bridgeport Branch Store is now under construction in Corpus Christi and will soon be in position to supply the requirements of operators in this district.

Stocks, consisting of our complete line of equipment including National Tube Pipe; American Wire Lines; Drilling Muds; Rotary and Cable Machinery and Tools; and new, used and reconditioned equipment of all kinds, are now on hand or in transit.

We'll appreciate the opportunity of serving you.

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HOUSTON, DALLAS, SAN ANTONIO, SHREVEPORT, CORPUS CHRISTI, TULSA, OKLA. CITY, WICHITA, NEW YORK, AND BRANCH STORES.

IN
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Efficiency

The Layne Screen during its third of a century use by the oil industry has proven its efficiency to permit greater inlet flow with least disruption of the formation.

The Layne Packer by its simple, positive operation, its 20 inch pack of iron hardness guarantees the efficient elimination of Packer troubles.

Specify the Layne Packer and Screen for your well.

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THE LAYNE
SCREEN *and* PACKER

crude from the Plymouth line. Still farther east, the Crude Oil Terminal Co. has erected 193,000 bbls. of storage capacity, and an additional 55,000-bbl. tank is being completed.

A total of 11 pipe lines now terminate in the Nueces County Navigation District. More than half that number have been added within the past year, all terminating in Corpus Christi. The Humble Pipe Line Co. and Atlantic Pipe Line Co. operate trunk lines to dockage at Aransas Pass, and a 20,000-bbl. Humble refinery at Ingleside processes much of that company's runs.

Corpus Christi has becomes the focus of lines from the north and west upon completion of two lines from Plymouth, one from Loma Novia and several from local fields of Nueces County. The Republic Pipe Line Co. last year laid a 20-mile line giving the Plymouth field outlet through the Texas Co. terminal. Later the Sinton Pipe Line Co. completed a second line from this field to the same terminal extending the line into the Refugio district. Since initial operation of the Republic line, that company has erected its own terminal.

The longest trunk pipe line leading into Corpus Christi is a 5½-inch welded line connecting the Loma Novia field in Duval County with deep water. This 72-mile line owned and operated by the Crude Oil Pipe Line Co. terminates at the 248,000-bbl. terminal of the associated Crude Oil Terminal Co. on the main turning basin of Corpus Christi. The outlet given to Duval County fields in this line is a development of primary importance, and further expansion of production in that district is expected to bring additional lines and crude into Corpus Christi.

REFINERY CONSTRUCTION

A reasonable result of this expansion of pipe line and terminal facilities is the kindred growth of refining in the district. This trend is already under way. The combination of accessible crude supply, favorable industrial sites and ready outlet by water transportation to coastal and foreign markets presages considerable development of the refining phase of the oil industry in Corpus Christi.

The Corpus Christi Refining Corp. has begun construction of a new unit which will more than double the capacity of the local plant. Designed and installed on a turn-key contract by the Wyatt Metal & Boiler Works of Houston, the new installation comprises a 5,000-bbl. combination skimming and cracking unit similar to that of the recently constructed refinery of the Coastal Refineries, Inc., at Port Isabel. The new unit will bring the capacity of the Corpus Christi plant to more than 10,000 bbls. In line with the expansion policy, a new vapor recovery unit is also being installed, designed by the Petroleum Engineering Co. of Tulsa. A new cooling tower has been added, and enlarged laboratory space and a new office building will complete the present project.

In conjunction with the addition of the new refining equipment considerable new tankage is being erected. Six 55,000-bbl. tanks and other smaller ones now nearly ready for use will bring the total of storage capacity at the plant to nearly 500,000 bbls. Part of this storage will be used as a terminal, and lines will be run to the new oil dock at Avery Point for each of the refinery products.

Principal products of the newly enlarged plant will be gasoline and furnace oils. The latter will be shipped to the Atlantic Coast on a three-year contract similar to that absorbing the products of the Port Isabel plant.

Initial operation of the entire project is expected by the middle of October. Crude from the Saxet, Saxet Heights and other local fields will be charged to the new units. The refining company operates producing wells on its own property at the plant site, which has been included in the extended Saxet Heights field.

Another refinery project is also under way in Corpus Christi. A 3,000-bbl. skimming plant will go on stream about the middle of September at

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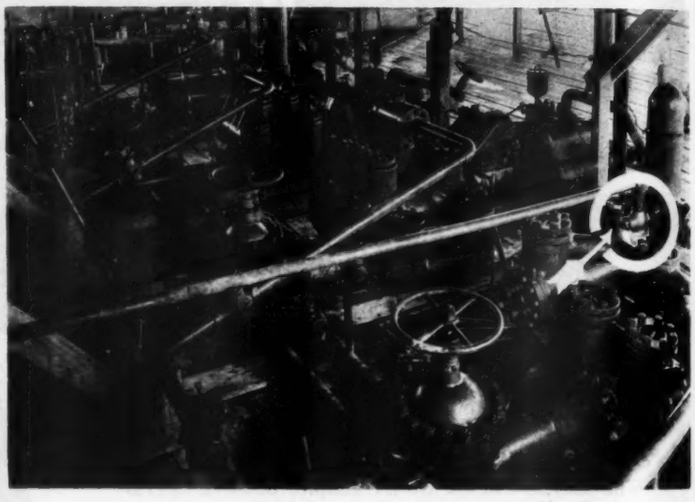

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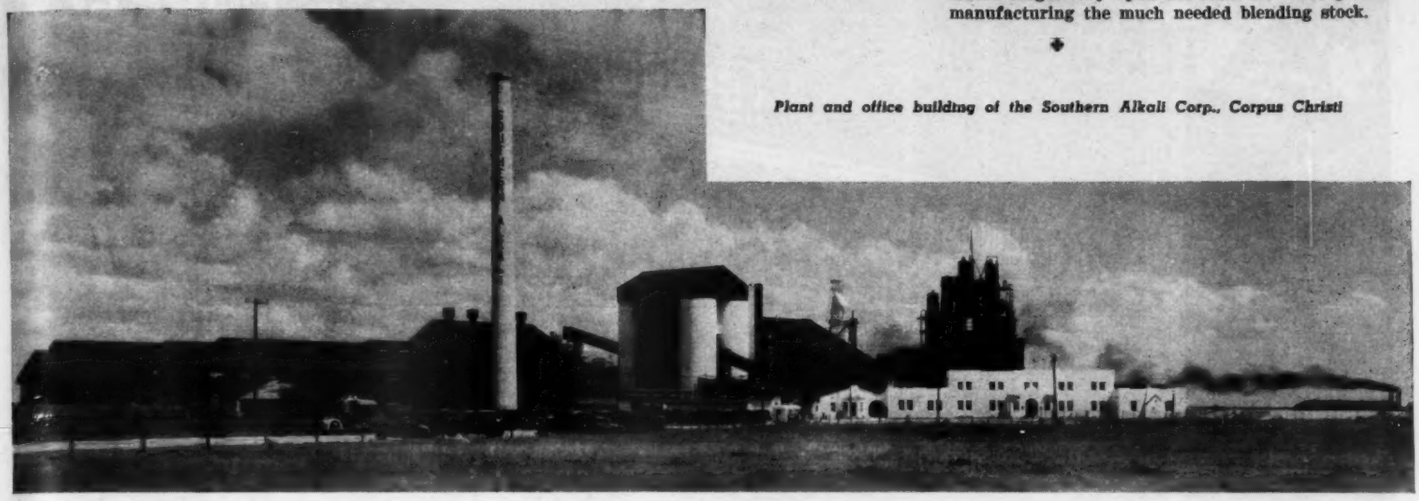
the terminal site of the General American Tank Storage & Terminal Co. The plant will be operated by the Eggleston Oil Corp., a new company organized and headed by George B. Eggleston of Houston. The plant is designed by Allen M. Piears of Dallas. Nueces County crudes will be processed in this plant also, being supplied by a local pipe line of the Houston Oil Co. The market outlet will be through the General American to the Atlantic Coast where products will be handled under a processing contract by the New Jersey Petroleum Corp.

In addition to the plants already under way in Corpus Christi, other refineries are being projected. The Amsco Refining Co. is reported to be contemplating the erection of a modern plant on the edge of the city, but details of the proposed plant have not yet been released.

The crudes of the surrounding fields offer a diversification rarely found in so restricted an area. From the several sands in the Saxet field, crudes of gravity ranging from 25 to 39.7 degrees are produced. Other areas yield oils of still wider gravity ranges, and the characteristics of the various crudes are equally as different. Naphthenic and asphalt base, mixed base and paraffinic stocks are found in the area.

The gas produced in the immediate area is not generally adaptable to natural gasoline manufacture. All sands but the deep Frio in Saxet yield gas with little or no gasoline fraction. The Plymouth field produces gas with an appreciable gasoline content. This production is now being processed in a recently constructed plant operated by the Manhattan Gasoline Co., a subsidiary of the Clymore Properties. In Nueces County, the former Clymore plant at Agua Dulce has been purchased by the United Gas System, and reconditioning is now under way for early operation. At the present time, no immediate supply of gas is available for natural gasoline manufacture in the district, but the development of some of the fields now in their initial stages may open the field for more plants manufacturing the much needed blending stock.



Plant and office building of the Southern Alkali Corp., Corpus Christi

C. E. Hearn, scouting department, Gulf Oil Corp., Tulsa, accompanied by Mrs. Hearn and two nieces, left Saturday for Crede, Colo., on vacation. H. E. Bradenberg, also of the Tulsa office, has returned from a vacation in Pittsburgh and other Pennsylvania points.

Wesley Yokom, of the Tulsa legal department, Ohio Oil Co., was winner of a free trip to Findlay, Ohio, in June, 1937, when the company's fiftieth anniversary will be celebrated. A similar award went to John B. Morrison, pumper in the Yates pool, West Texas. Their names were drawn from a list of employes who formerly worked for the company in northwestern Ohio.

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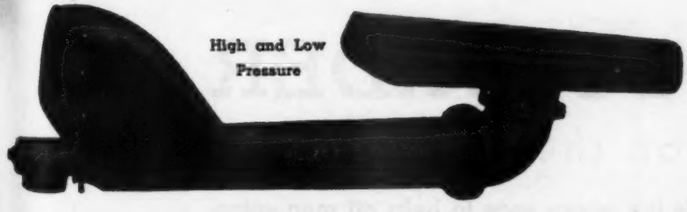

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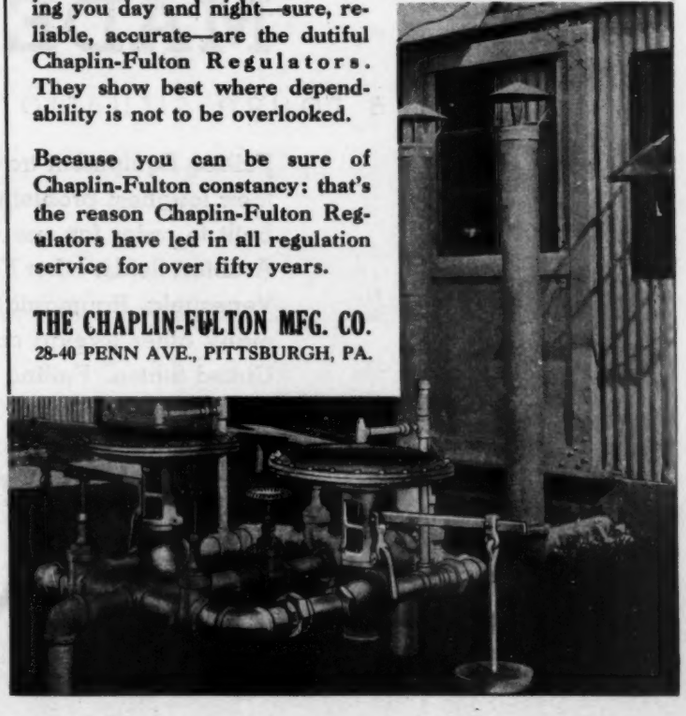

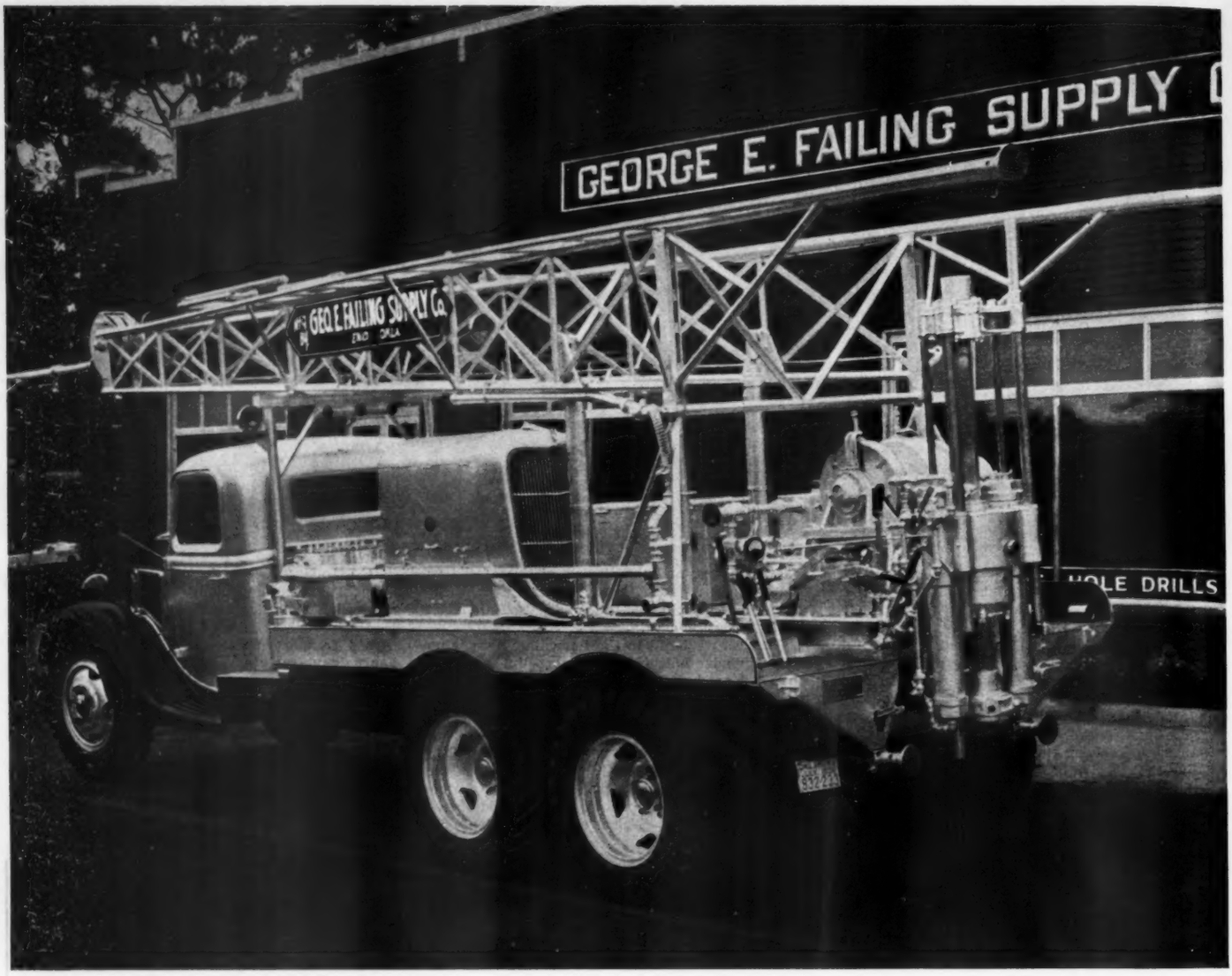

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Multiple Sand Production Gives Wide Oil Range in Corpus Christi Area

CORPUS CHRISTI, Tex., Aug. 17.—Arising from the manifold sand production found in the Corpus Christi district, a remarkably varied range of crudes is found through that relatively restricted area. A general survey of the characteristics of these oils affords many interesting revelations. Not only do the crudes from neighboring fields differ, but those produced in different sand horizons of the same field are found to show considerable variation in content of various cuts. This is true especially of the Saxet field, where eight sands are productive, each bearing a crude having some characteristic different from the others.

The production in separate fields but from the same horizon does not necessarily correspond, as is seen in comparisons of the Flour Bluff and 5,800-foot Saxet production, and the stocks from the Greta and Taft fields. Crudes in the area range from naphthenic and asphaltic nature through the mixed base ranges to strictly paraffinic. High aromatic content is noted in several of them, and the octane ratings of naphthas refined from all of the various stocks extend from a low of 37.8 to 69.8.

Although several of the crudes produced in the area show characteristics which would warrant processing for special products and cuts, the volume of production in most cases precludes this possibility. Also, those crudes which yield good octane gasolines, favorable cracking stocks and other desirable cuts, are already contracted by refiners, and until production is developed to a much greater extent, none of them will be available to others.

FIELD OUTLETS

Those fields in the district which have been developed to a size to justify the laying of pipe lines are connected into terminals and refineries of the Corpus Christi district. The proximity of the fields to this ready outlet contributes to the rapid laying of lines, and at present only a few of the newer fields have not yet been tied into the network converging on Corpus Christi, Ingleside and Harbor Island. The greater share of the crudes which are run to stills in the larger refineries of the Gulf Coast are mixed with others of the same relative nature, classed as Mirando Type, Refugio Light, etc. Some of the refineries, however, process crudes separately, making batch runs on those not available in sufficient quantities to furnish long-time operation.

ANALYSES OF CRUDES

The accompanying table shows brief analyses of some crudes produced in the district. The descriptions are not asserted to be representative of the entire production of the respective fields, as many of the analyses were made on production samples of one well. The sulfur content of most of the crudes is relatively low, characteristic of production in the general district. The unexplainably high aromatic content in many of them is also found in many South Texas crudes.

As the most important production developing in the immediate vicinity of Corpus Christi, the 5,800-foot sand is of special interest. A sample taken from the Rand Morgan lease in the field shows a gravity of 40.4 and a sulfur content of .2 per cent. The naphtha yield of the crude runs 23.7 per cent for a 300° F. endpoint cut. This 63.5 A.P.I. gravity fraction shows a relatively high octane number, ranging around 67.5, due probably to the high aromatic content of 13 per cent. A kerosene cut taken from 24.6 to 67.2 shows a gravity of 41, a thermo viscosity of 365 and a low sulfur content of .04 per cent. This crude coming from the Frio horizon differs from both the Plymouth crude and that produced in the new Flour Bluff field; all three horizons lying in the same section.

The crude producing from the one well in Flour Bluff shows very interesting contrast in relation with the other crudes of the general district. The field was opened recently at a depth of 6,640 feet, corresponding in section to the 5,800-foot sand in Saxet. The crude most nearly resembles that produced in the Pettus field of Bee County about 75 miles to the north. It is of paraffinic nature, and although of high gravity, the kerosene content rather than the naphtha is predominant. This is of course variable with the size of the cuts taken. On a 400° endpoint naphtha, taken at .6 to 33.0 per cent, the yield is 32.4 per cent and the gravity is 55.6. The following cut of kerosene shows a 17.8 per cent yield with a gravity of 42.8. When a 300° endpoint naphtha cut is made, yielding 13.9 per cent of 64.1 gravity stock, the following kerosene cut to 550° endpoint shows the high content of 54.6 per cent and 44 gravity.

FLOUR BLUFF CRUDE

Flour Bluff crude has a light green cast and a gravity of 41.8 degrees A.P.I. The sulfur content tests .09 per cent, and the viscosity at 100° F. is 34 Saybolt seconds. The octane rating of the naphtha cut is low as expected from the paraffinic nature of the stock, ranging 37.8. This number and the yield of naphtha are based on the test of a sample which had been slightly weathered, and the loss of the light fractions is believed to show a lower octane rating and yield than truly characteristic of the crude. It is about 3 or 4 degrees lower than the Pettus crude in gravity with a correspondingly lower naphtha yield.

The kerosene fraction shows a thermo viscosity of 475 and a sulfur content of .032 per cent. A gas oil fraction taken from 50.7 to 81.4 has a high diesel index of 66.5 and a high pourpoint of 15°. The pourpoint of the lube cut taken at 81.4 to 94 per cent

Analyses of Crudes in Corpus Christi District

	Plymouth	Greta	Quintana	Sinton	Taft	Saxet† (5,800 ft.)	Flour Bluff	Saxet (4,800 ft.)	Heyser	Tomoconnor	Driscoll	Saxet Heights
Crude:												
Gravity	31.3	38.8	33	49	23.5	40.4	41.8	25.8	33.4	35.3	23.5	23.4
Per cent sulfur	.....	.085	.58	.05	.18	.20	.09	.08	.23	.098	.....	.....
Naphtha:												
Per cent yield	27.2	50	30	82.5	7.1	23.7	32.4	14.8	16.8	33.2	10.0	7.5
Gravity	54.4	52	55	53.4	52.0	63.5	55.6	43.5	56.8	52.3	34.1	36.9
Endpoint, °F.	404	400	400	400	368	300	400	400	300	400	400	410
Per cent sulfur	.02	.02	.03	.02	.04	.....	.025	.03	.03	.027	.....	.....
Octane number	.....	58	51	69	69.8	67.5	37.8	63.7	69.3	58.0	.....	.....
Kerosene:												
Per cent yield	23.0	19.1	0	12.5	20.4	42.6	17.8	0	30.9	17.7	63.0	0
Gravity	35	38	.....	37	33.6	41	42.8	.....	41.1	36.9	26.9	.....
R. O. viscosity	.....	475	.....	380	475	365	475	.....	310	475	.....	.....
Per cent sulfur	.05	.065	.....	.07	.06	.04	.032	.....	.06	.069	.....	.....
Gas oil:												
Per cent yield	25.0	15.8	64	0	22.5	.....	30.6	40.2	50.5	19.1	0	65.6
Gravity	25.7	30	26.4	.....	27.6	.....	38.5	30	30.1	30.0	.....	27.1
Per cent sulfur	.08	.09	.15	.....	.11	.....	.05	.07	.15	.127	.....	.....
Lube blend:												
Per cent yield	.....	.....	.....	.....	45.0	.....	12.6	38.6	9.0	25.0	0	0
Gravity	.....	.....	.....	.....	18.6	.....	29.8	19.5	15.6	20.0	.....	.....
Viscosity, 100° F.	.....	.....	.....	.....	274	.....	73.0	.....	1,080	277.5	.....	.....
Viscosity, 210° F.	.....	.....	.....	.....	44.6	.....	36.6	41.7	61	46.0	.....	.....
Pourpoint, °F.	.....	.....	.....	.....	—25	.....	+65	—30	—45	60	.....	.....
Per cent sulfur	.....	.....	.....	.....	.31	.....	.12	.20	.....	.28	.....	.....
Bottoms:												
Per cent yield	24.6	4.8	6.3	4.5	5.0	.....	6.0	6.3	4.8	4.2	26.5	29.8
Gravity	13.7	9.6	5.3	27	9.8	.....	17.5	10	8.3	9.0	14.0	15.8
Per cent sulfur	.08	.57	.87	.134	.98	.....	.29	.....	.56	.44	.....	.....
Viscosity at 210° F.	†300	1,079	7,000+	32	14,828	.....	124	2,122	1,483	3,466	.....	*82

*Viscosity at 122° sec. Furol. †Incomplete.

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Scene at the camp for Plymouth Oil Co. employes near the town of Sinton, and the Plymouth field in San Patricio County. The offices of the company were recently moved from San Antonio to a building on the site

shows a good viscosity differential but also a very high pourpoint. The viscosity at 100° is 73 seconds and that at 210° is 36.6 seconds. The pour is 65°. Although the supply of this crude is at present restricted to that produced by the discovery well, the nature of the sand, and other factors lead to the expectation of considerable development of the new field.

A large share of the production in the Corpus Christi district comes from the Plymouth field in San Patricio County. This 31.3 gravity crude yields a 400° endpoint gasoline cut of 27.2 per cent. The stocks are low in sulfur content and a major part of the field production is shipped out of the district for processing in larger plants of the Gulf Coast where the intermediate cuts are cracked.

LIGHT SINTON DISTILLATE

In sharp contrast to Plymouth crude is the high gravity Sinton production found to the west. This crude is of interest mainly because of its character, as production is practically negligible. The crude itself has a gravity of 48 degrees and a low sulfur content. The naphtha yield runs as high as 82.5 per cent of 400° endpoint stock, with an octane number of 69. Cuts have been obtained from this crude with octane ratings as high as 74.1 for a 56.8 per cent fraction. The kerosene content of this crude is 12.5 per cent with a gravity of 37 and a thermo viscosity at 380. Gas-oil and other intermediate fractions are negligible with bottoms of 4.5 per cent showing a viscosity of 32 seconds at 210° F. In this case, the analysis of any one sample such as the one here described, is not necessarily indicative of the crude produced throughout the field, or over any considerable length of time.

TAFT FIELD

Another field of San Patricio County which produces crude of a type differing from that of nearby fields is Taft, located about 2 miles south of the Plymouth field. This area was opened with production in a 4,900-foot sand since designated as the Greta. It differs from both the Plymouth and Greta oils. A sample taken from the discovery well has a gravity of 23.5 degrees and a sulfur content of .18 per cent. The naphtha of 400° endpoint specification showed a low yield of 7.1 per cent, but the octane number was found to be relatively high at 69.8. Kerosene content with a gravity of 33.6 and a thermo viscosity of 475 shows but 20.4 per cent yield. The low gravity of the crude combined with the poor fill and high octane rating of the gasoline cut would show evidence of a high

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aromatic content in the oil, but tests of a narrow gasoline cut showed only 11 per cent.

The lube fraction from the dark green crude has viscosities of 274 and 44.6 at 100 and 210 degrees, respectively, and a low pourpoint of —25. The viscosity of the bottom 5 per cent, however, runs nearly 15,000 seconds at 210° F.

SAXET HEIGHTS FURNACE OILS

The crude from the Saxet Heights or Corpus Christi fields lends itself readily to the manufacture of furnace oils. The gravity is relatively low at 23.4 degrees, and the crude has a green cast. Naphtha yield is low as might be expected from the crude gravity, but the lower cuts are being cracked for additional gasoline yields. A furnace oil cut of 65.6 per cent has a gravity of 27.1 degrees A.P.I. and a viscosity of 41.1 seconds at 210° F. A fuel oil cut of 29.8 per cent shows a cold test of 10° F. and a gravity of 15.8 A.P.I. This crude together with several of the lower gravity stocks from the Saxet Heights field is successfully being processed to make No. 2 and No. 4 furnace oil.

Crudes in fields of the Refugio district northeast of Corpus Christi show a closer resemblance than those produced in Nueces or San Patricio County fields. The Tomoconnor field yields crude of the light Refugio type averaging 35.3 gravity. A small sulfur content of .098 per cent is tested in this crude which has an olive green cast. A fairly high 400° endpoint naphtha fraction is obtained from this stock, and the octane number is 58. Kerosene content ranges around 17 per cent, having a thermo viscosity of 475. The 20 gravity lube cut taken from 70 to 95 per cent is not suitable for lube manufacture because of a high pourpoint of 60° F. The desirable octane rating and relatively high yield of gasoline, coupled with the possibility of major production in the field, make this crude an important one in the district.

HEYSER FIELD

A field which though recently discovered, has seen considerable development is the Heyser field of Calhoun County. The crude from this area resembles that from Quintana or Tomoconnor, being also classed as Refugio light. It has a gravity of 33.4, a light green cast and a viscosity of 37 seconds at 100° F. The naphtha yield, though not especially large, constitutes a good straightrun gasoline with an octane number of 69.3. The aromatic content of this cut has been determined at 6 per cent. Large kerosene and gas-oil cuts which will crack to produce more gasoline add to the importance of this crude as a source of good motor fuel. The lube stock shows a poor viscosity index with a viscosity of 1,080 seconds at 100° and 61 at 210° F. Sulfur content of the crude is .23 per cent, the lighter ends showing a much lower figure with bottoms containing .56 per cent.

Greta crude, another Refugio district oil, has a gravity of 38.8 degrees, constituting one of the best in the area. The production of this field which is of major importance further enhances the value of the crude. A large gasoline yield of 50 per cent and 400° endpoint shows an octane rating of 58 and a very low sulfur content.

A test drilled in the Saxet Heights or Corpus Christi field a few hundred feet from the property of Southern Alkali Corp.

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Published JANUARY, 1936

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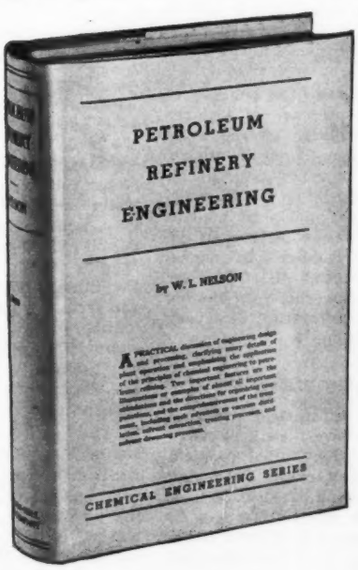

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Plymouth Field, Corpus Christi Area, Example of Orderly Development

CORPUS CHRISTI, Tex., Aug. 17.—The Plymouth field of San Patricio County, lying north of Corpus Christi, today represents a considerable part of the productive area in the Corpus Christi district. Since its discovery, in April of 1934, the field has seen orderly drilling, and operators are limited to a relatively small number. The depth of the producing horizons and the high-pressure conditions encountered in operating in the field have mainly accounted for this restriction.

To date 88 producing wells have been completed in the Plymouth pool. At this stage in the field's development the allowable stands at 9,920 bbls. per day, which brings its yearly production to approximately 3,621,000 bbls. The potential production is estimated to be 17,000 bbls. per day at present. If the present rate of development continues throughout 1936, and its consistence over a long period coupled with the large potential expansion of the area point toward such continuance, the field will consist of about 120 wells by the end of the year. At that stage the production would approach 13,000,000 bbls. per day.

HISTORY OF DISCOVERY

Creekology first indicated the presence of a structure in the general area of the Plymouth field. Surface study of the two streams, the Aransas River and Chiltipin Creek, in the northeast part of the county, make pronounced northward bends in approximate parallel positions. This departure from the usual eastward course of the streams pointed to the presence of a fold. In addition, the discovery of shallow gas production in two different wells located between the streams, substantiated the belief that potential oil production was to be found in the area. The two gassers which were producing at 3,700 feet and 3,000 feet 4 miles apart showed evidence of a distinct flattening on the subsurface. However, the lack of sufficient paleontological information from shallow wells drilled in the area detained active exploration for a period.

The district was then worked geophysically, and the resulting picture showed a structure of considerable magnitude, representing a regional high or a buried land mass. This finding, which did not conform to the usual salt dome type of structure prevalent throughout the Upper Gulf Coast, disappointed other operators interested in salt dome production.

Following the program of geophysical exploration where magnetometer, torsion balance and seismograph methods were followed, the Plymouth Oil Co. made location for No. 1-C Welder, which was selected on the top of the structure as shown by the seismograph picture. This test encountered oil in a sand at 5,501 feet and was completed for a commercial producer making 420 bbls. per day of 37 gravity oil through a one-quarter inch choke. The sand opened in this discovery well was named the Plymouth sand.

Following this discovery, the Heep Oil Co. began a test on a 400-acre block about 7,000 feet southwest of the Plymouth well. This test found the Plymouth sand incapable of producing commercial production, and upon drilling deeper a second sand was encountered at 5,579 feet. This sand section, of which the last several feet taken showed oil, was brought into production for 720 bbls. per day through a one-quarter inch choke. The opening of two sand horizons, the Heep or deeper sand showing the most prolific production, indicated a discovery of considerable magnitude.

Further drilling in the field has opened up over 2,000 acres to present and potential production, and conservative estimates place the total expected recovery at about 45,000,000 bbls. of oil. The field is tentatively delimited on the west and northwest, but the southeast limit of production has not yet been indicated. Probable total area of the producing sands is placed at 2,300 acres, based on the contours on the top of the Heep sand in edge wells.

GEOLOGY OF PLYMOUTH

The surface geology of the area shows an elevation averaging 30 feet. The surface beds are recent in age and their exposure show no indication of the field structure. The key markers of the field in subsurface study are the Discorbis and Heterostegina formations of the Middle Oligocene group, furnishing the best evidence for paleontological correlation. Based on contours of these formations, the strike of the area is determined at 25 degrees west and the southeast dip approximates 150 feet to the mile. The lower member of the Middle Oligocene group, the Marginulina, is apparently missing in the area, and no dependable markers are found in the Frio shales directly underlying the Middle Oligocene. Thus the last reliable marker before encountering the Sinton sand series is the Heterostegina.

The uneven depositional nature of the Sinton sand series occurring from 5,200 feet to 6,300 feet has led to a discrepancy in the interpretations of various geologists familiar with the field. It is believed by some that the same sands encountered at different depths throughout the field have been given different names, and general agreement on the correlation has not yet been reached. Of the three principal producing sands, one authority gives the following positions: The Plymouth sand occurring from 5,200 to 5,400 feet, the Heep sand at 5,600 feet and the Magnolia sand at 5,900 feet. The top of the Heep sand and the base of the Heterostegina constitute an interval of about 900 feet, which interval is used as a basis in the above correlation.

The sands of the Sinton group are believed to owe their existence to the presence of a large sand bar lying to the northeast of the area. Shoreline conditions at the time of their deposition, involving inshore tide and current disturbances, apparently account for the pinching out of sands on the structure, and the rapid change of sand to sandy shale and shale in the Heep horizon on the west edge of the field. This condition is general with sands of the Lower Coastal district. They show a lensing appearance, fingering into similar shaley deposits and lending credence to the theory of irregular shoreline deposition.

SOUTHWEST PLYMOUTH

The greatest irregularity in the field structure is found in the south and southwest sections where the Heep sand at 5,600 feet has failed to yield production. In this area, the Magnolia Petroleum Co. has opened a productive sand at 5,900 feet. A downthrown block or graben about 3,000 feet in width is generally agreed to exist in Survey 47 between the Conroe Drilling Co. No. 3-D Welder and the Magnolia Petroleum Co. No. 1 Taft. Reason for this conclusion is the absence of the 5,200-foot sand in tests of that area, causing a lengthening of 80 to 100 feet in the upper Frio section. Normal interval between the Heterostegina and the producing horizon is found in all wells to the south, but the producing horizon in this section is found about 325 feet lower than in the main body of the field to the northeast. The 5,600-foot sand, principal producing horizon of the field proper, is found in the south section in its normal position, but is not oil-bearing.

The 5,900-foot sand which produces in the southern section of the field is believed productive in the main body, but the structure has not yet been tested to that depth in Plymouth proper. The Plymouth Oil Co. recently drilled to a depth of 5,881 feet in the No. 5-C Welder, located in the SE cor. of Section 50. This north-edge test encountered oil sand at 5,872-81 feet and was completed in this new sand for 250 bbls. per day. This sand is not generally believed to correspond to the 5,900-foot sand producing in the south. It is of major importance, however, in showing indications of another producing horizon which may extend throughout the area of the pool.

DESCRIPTION OF SANDS

In the Heep, or principal producing sand of the field, a definite gas-oil contact is encountered at about 5,575 feet. The porosity of the sand at this point also shows a distinct change; the gas sand showing a porosity of 16 to 22 per cent as compared with the range of 24 to 33 per cent in the oil sand. The water table in this sand is encountered at —5,610 feet, varying slightly due to erratic deposition of the formations.

The 5,600-foot sand is whitish gray in color; even grained and coarse. Like other Frio sands it is much cleaner than the sands found in the Middle Oligocene series, being unusually free of shaley material. In the gas sand overlying it, a higher shale content is found, which together with the finer texture of the sand itself, gives it a lower porosity. The gas sand averages 27 feet in thickness and the oil sand measures 22 feet.

Comparatively little is known of the 5,900-foot sand's producing possibilities because of its early development stage at present. This sand has the same general characteristics of the 5,600-foot oil sand and averages 12 feet in thickness.

CRUDE CHARACTERISTICS

The crude produced in the 5,600-foot sand averages 37 gravity A.P.I. and is dark green in color. At the reservoir pressure of 2,420 pounds corrected to —5,580 feet, and the temperature at 173° F., the crude contains in solution about 500 feet of gas. The methane and ethane fractions constitute about 95 per cent of the gas content. Casing pressures of wells in the field average 970 pounds. However, wells improperly completed will develop high gas-oil ratios and accompanying high pressures ranging up to 1,500 pounds with 1,250 pounds on the tubing. This is occasioned by the release of gas from the crude in the reservoir and the formation of a localized gas cap around the well sump. The gas cap will in time unite with the gas horizon in the upper sand, causing high gas and distillate production and resulting in a variation in gravity of the crude produced.

The area of the gas cap in the 5,600-foot horizon has been estimated to be about 2,270 acres with an average thickness of 27 feet. From calculations involving the porosity of the gas sand, the pressure and temperature corrections for formation conditions and other factors, the total volume of gas in the 5,600-foot cap is estimated to be 72,420,000,000 feet at normal pressure and temperature. This large gas reserve is of considerable importance in the production of crude in the Plymouth field. Together with the encroachment of the water table, the gas cap exerts an equalizing pressure on the oil reservoir as crude is withdrawn. The presence of these two energies together will greatly prolong the flowing life of the field.

Total production from the field up to the present time exceeds 2,000,000 bbls. Since no static pressure survey of the pool has been made, a pressure history of Plymouth is not available. The

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production period has doubtless been too short as yet to show anything pertinent. From comparable conditions in other older fields, however, a conservative estimate will place the per cent of oil recovery by natural flow to be about 70 per cent. At the present rate of flow exceeding 3,500,000 bbls. per year, the flowing life of the field will probably last less than nine years. The foregoing contentions apply to the 5,600-foot Heep sand.

DRILLING PRACTICES

The spacing rule for the Plymouth field calls for one well to be drilled per 20 acres, which pattern, it is believed, will efficiently recover all oil possible. In completing wells the open hole method is popular. The clearly defined gas-oil contact in the Heep sand allows the setting of casing at the correct point just below the contact. The hole is then drilled into the oil sand and brought in for production. The practice of setting casing on the bottom and perforating for production, though widely used in most fields of this section, is not necessary in Plymouth, because of the sharp definitions of gas and oil sands. Casing of 7-inch size is commonly set for oil string, and 2-inch tubing is run and landed one joint off bottom. Continuous production over a 24-hour period is the general practice throughout the field.

The gas produced with the oil was formerly vented and burned in flares directly after separation. A natural gasoline plant was recently constructed in the field by the Manhattan Gasoline Co., however, which now takes all gas production for stripping before it is vented.

A recent development of interest in the field is the drilling of tests in the bed of Chilitipin Creek. This creek which now flowes through the heart of the field, was surveyed and the elevation was found to be below mean sea level. This places the creek bed in the category of tidewater land and as such was leased from the state of Texas by the Centennial Oil Co. This company which has had considerable experience in drilling the bed of the Sabine River in the East Texas field, has completed two producers and is drilling two additional ones. The program calls for the drilling of 10 or more producers. Piling is driven for the substructure of derrick and rig, and the top of the hole is located several feet toward midstream from the point of zero elevation in the creek bed. Directional surveying is used consistently also to insure the drilling of a straight hole.

TAFT FIELD

To the south of Plymouth about 2 miles lies the Taft field. This area was opened by George E. Smith on the Britton lease, and at first was believed to constitute an extension to the Plymouth field. Subsequent operations opened a second producing sand, and apparently defined the discovery sand on the north, east and northwest. The field is now producing a total of 10 wells in both horizons. The first sand opened was encountered at 4,900 feet and was classed as the Greta sand. The second sand which has since accounted for much of the field production was cored about 100 feet higher at 3,900 feet.

The latest development in the field is the opening of a third sand. The Conroe Drilling Co. last week recovered 570 feet of pipe line oil in 10 minutes at 4,353-61 feet with a working pressure of 18 pounds. This is thought to be a sand which enters on the flank of the field structure and probably pinches out at the top of the structure itself. That condition is characteristic of sands in the Lower Gulf Coastal area.

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Spacing Pattern of Flour Bluff Field Is Recommended

AUSTIN, Tex., Aug. 17.—A spacing pattern of one well to 20 acres was recommended to the Railroad Commission for the new Flour Bluff field in Nueces County by the Barnsdall Oil Co.

J. C. Pool, engineer for the company which completed the discovery well, testified 20-acre spacing would provide effective drainage of the pool. Several royalty owners asked the commission to adopt a 10-acre spacing rule, expressing belief the returns would be greater, but landowners supported the wider spacing proposal.

Pool estimated the field was 6,500 feet wide and twice as long, expressing belief it did not extend to public school submerged land areas in Oso Creek at Corpus Christi Bay.

Crude Oil Stocks

Stocks of domestic and foreign crude petroleum at the close of the week ending August 1 totaled 306,751,000 bbls., according to data by the Bureau of Mines, a decrease of 217,000 bbls., comprising decreases of 173,000 and 44,000 bbls. in stocks of domestic and foreign crude, respectively. Daily average runs to stills declined 80,000 bbls., or from 2,990,000 to 2,910,000 bbls. Daily average imports rose to 94,000 bbls. from the revised figure of 86,000 bbls. for the previous week.

STOCKS OF CRUDE PETROLEUM

Grade of crude oil—	July 25	Aug. 1
Pennsylvania Grade	4,108,000	4,066,000
Other Appalachian	758,000	745,000
Lima-N.E. Indiana-Michigan	1,308,000	1,270,000
Illinois-S. W. Indiana	10,159,000	10,139,000
N. Louisiana and Arkansas	10,642,000	10,795,000
W. Texas and S. E. New Mexico	28,848,000	29,066,000
East Texas	21,323,000	21,491,000
Other Mid-Continent	122,086,000	121,841,000
Gulf Coast	28,394,000	28,446,000
Rocky Mountain	26,252,000	26,217,000
California	33,912,000	33,592,000
Foreign	2,427,000	2,383,000
Total reported weekly	290,218,000	290,051,000
Estimate of unreported stocks	16,750,000	16,700,000
Total stocks	306,968,000	306,751,000

Refiners Association Meets

SHREVEPORT, La., Aug. 17.—The monthly meeting of the technical group of the Arkansas-Louisiana-Texas division of the Western Petroleum Refiners Association was held in El Dorado, Ark., Friday, August 14. A paper on "Designing and Welding of Piping Systems," by F. C. Fantz, vice president of the Midwest Piping & Supply Co., St. Louis, Mo., featured the meeting.

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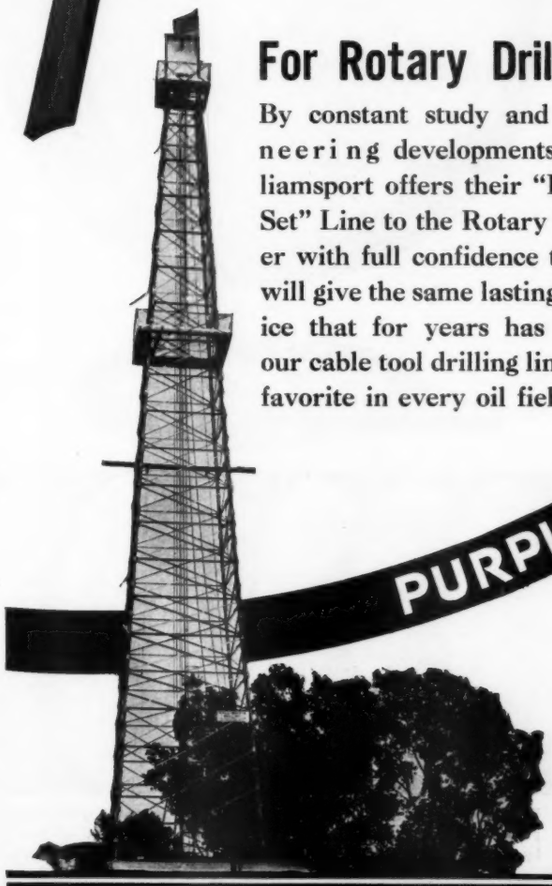

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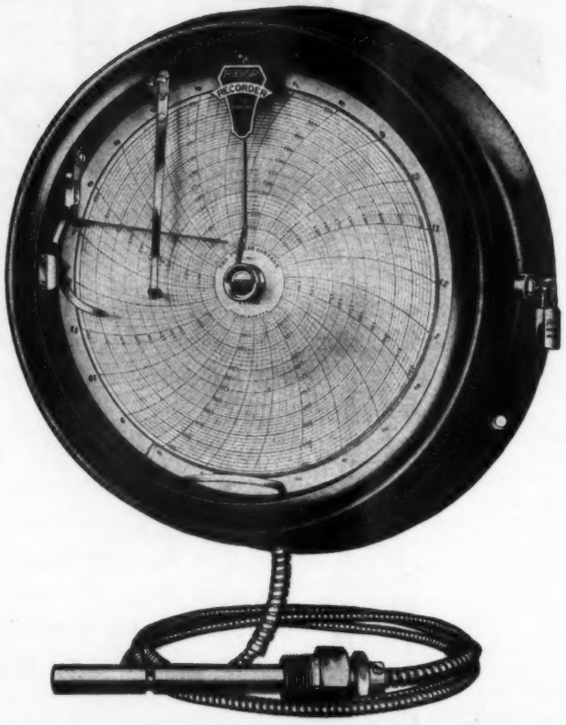

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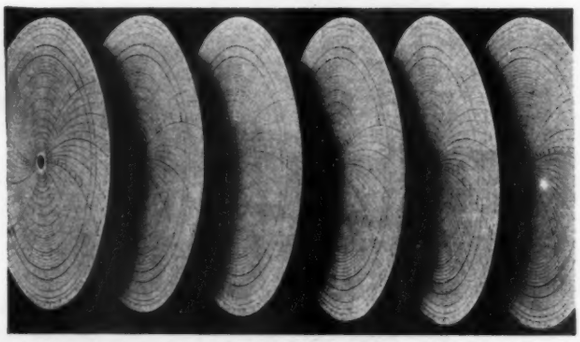
RECORDING THERMOMETER A	32 SECONDS	47%
RECORDING THERMOMETER B	42 SECONDS	37%
RECORDING THERMOMETER C	33 SECONDS	45%
RECORDING THERMOMETER D	85 SECONDS	18%



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FIELD OPERATIONS

Summarizing the Week's Developments

Altogether 498 wells were completed in the fields of the United States in the past week of which 354 were oil wells. There was little change from the record of the previous week.

The famous old Lima field in Ohio, down to a production of 2,000 bbls. per day, from 7,000 wells, is threatened with a loss of most of its market as the National Refining Co. has issued notice that it will withdraw as a purchaser in 90 days.

OKLAHOMA

The Tussy pool in northern Carter County, Oklahoma, was extended into southwestern Garvin County by a well in section 21-1-3w, which swabbed and flowed 50 bbls. in one hour from 2,678 feet, total depth. A wildcat south of the Hewitt pool, Carter County, was deepened and flowed 290 bbls. in three hours.

KANSAS

A test in the Otis gas area, Rush County, flowed 1,386 bbls. of oil in 12 hours, reviving oil activity in that sector. A big Siliceous lime gas well was completed in section 35-19-8w, to open a new area in Rice County and a new pool is in prospect in section 10-11-18w, Ellis County.

MICHIGAN

Mecosta County, the largest gas area in Michigan promises to join the oil producing counties, although the discovery well is only an estimated 30-bbl. producer. A probable Dundee sand discovery is being tested in Geneva Township, Midland County.

GULF COAST

The Cotton Lake field in Chambers County, Texas, opened by a 218-bbl. well is sharing attention with two other important tests in the Heyser area in northwestern Calhoun County, showing oil on pre-completion tests. The Anahuac field was extended by a 700-bbl. well. The Clarenton prospect in St. Mary Parish, Louisiana, looks like a new pool. The Gillis field in Calcasieu Parish was extended southeasterly.

ROCKY MOUNTAIN FIELDS

The best new well in New Mexico was a 2,272-bbl. initial producer in the Eunice pool, Lea County. Nine new oil wells in the county averaged 936 bbls. per day per well. A well in the Medicine Bow field, in Wyoming, started off at 93 bbls. per hour of 60-gravity oil and with 16,000,000 feet of gas per day.

CALIFORNIA

The East Coyote pool in Orange County, California, was extended 3,000 feet by a 260-bbl. well producing 60-gravity oil at 2,811 feet, total depth.

SOUTHWEST TEXAS

A shallow pool was opened in Duval County with a 115-bbl. well; a wildcat in Jim Hogg County was showing oil and the Taft field was extended, as features of the week in the Southwest Texas field.

EAST TEXAS

The deepest well ever drilled in the East Texas field is a failure at 7,799 feet. It was finished in Travis Peak, a lower member of the Trinity series. Ten new oil wells were added to the Talco pool in northeastern Texas.

The Anderson & Kerr pool in Cooke County, Texas, producing 42-gravity oil at about 2,000 feet is the liveliest area in North Texas. New refineries and loading racks are being built to take the production and field work is very active.

THE RODESSA FIELD

The Texas side of the Rodessa field is now showing more activity than the original development in Caddo County, Louisiana, because of the vast acreage proved by recent Cass County tests. An engineering commission is studying bottom hole pressure and other important data connected with Rodessa, as the Louisiana Conservation Commission insists that an end be put to abnormal gas wastage. Leasing extends well into Miller County, Arkansas. Rodessa may become the first tri-state oil field.

Completions in All Fields

(Week Ending August 15, 1936)

	Oil	Gas	Dry	Total	1936 total comp. to date	1935 total comp. to date
Penna. Grade Fields	65	13	10	88	1,897	1,810
Lima Field	0	1	1	2	38	62
Central Ohio	2	6	2	10	200	236
Indiana	6	3	5	14	108	128
Illinois	0	0	0	0	24	10
Michigan	7	4	10	21	373	296
Kentucky	3	1	2	6	142	153
Kansas	22	2	10	34	1,004	755
Oklahoma	45	3	8	56	1,557	1,186
North Central Texas	8	0	6	14	1,666	1,653
West Texas	29	2	6	37	888	482
Texas Panhandle	8	2	0	10	420	420
East Central Texas	4	0	4	8	190	157
East Texas	53	0	1	54	1,706	3,044
East Texas border	0	0	0	0	37	7
Gulf Coast Texas	18	1	7	26	707	631
Southwest Texas	43	2	8	53	1,794	885
Total Texas	163	7	32	202	7,408	7,279
North Louisiana	10	2	2	14	408	182
Gulf Coast Louisiana	3	0	4	7	232	236
Total Louisiana	13	2	6	21	640	418
Arkansas	0	0	4	4	61	84
Montana	2	3	1	6	134	98
Wyoming	1	0	0	1	54	39
Colorado	0	0	2	2	20	9
New Mexico	10	0	1	11	356	181
Utah	0	0	0	0	5	4
California	15	0	5	20	745	707
Total U. S.	354	45	99	498	14,766	13,455
Total Previous Week	356	47	93	496	14,268	
Difference	2	2	6	2	498	

Outstanding Fields—Highlights

(Week Ending August 15, 1936)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
Anahuac	1	7	1	706	104	7,989
Hastings	1	4	2	1,144	90	7,365
Loma Novia	4	7	5	1,930	557	14,580
Seven Sisters	5	9	6	1,800	249	6,250
Saxet Heights	5	14	6	1,050	144	7,140
Saxet	7	34	6	950	183	14,100
East Texas	39	144	53	2,159	21,200	438,248
Talco	7	34	10	1,826	33	4,600
OKLAHOMA						
Oklahoma City (capitol area)	4	24	7	10,650	133	61,315
Oklahoma City (old field)	0	2	0	0	972	103,160
Fitts	10	55	11	11,254	413	64,650
Burbank-So. Burbank	0	10	2	1,109	2,155	23,600
KANSAS						
Ellis County	2	33	1	1,369	42	2,423
Reno County	4	23	7	3,006	307	16,852
Russell County	7	37	2	2,326	545	39,885
Rice County	9	43	2	2,671	445	21,385
NEW MEXICO						
Lea County	8	85	9	6,627	916	69,860
LOUISIANA—TEXAS						
Rodessa, La.	3	30	7	3,696	258	58,785
Rodessa, Tex.	7	32	0	0	30	7,475
Gillis, La.	1	5	1	500	48	15,439
Tepetate, La.	2	2	1	156	23	5,137
MICHIGAN						
Porter-Yost	6	7	5	765	400	17,050
Crystal-Centcalm	4	17	2	260	136	5,300

Michigan Field Report

By PAUL A. ELLIOTT

MECOSTA ADDS AN OIL POOL TO ITS VARIOUS GAS AREAS

MUSKEGON, Mich., Aug. 17.—Another Michigan wildcat, flirting with possibilities of success for some time, last week responded to acid treatment 210 feet in the Dundee with a resulting estimated initial of 25 to 30 bbls.

Though not completed as the week closed, W. J. Bernier No. 1 Fitzgerald, NW NW SE section 9-13n-9w, was considered the possible discovery well of the first oil field in Mecosta County. It is in Deerfield Township near the village of Morley, one township west of the Hinton Township section of the state's largest gas field, the Tri-Townships area, and several miles southeast of the Austin Township, Mecosta County, gas field.

Dundee was first encountered at 3,474 feet with the first show of oil at 131 feet in, and drilling suspended for a test with acid at 3,675 feet. It also struck a show in the Traverse previously, arousing considerable interest as the oil possibilities of Mecosta County, hitherto only producing natural gas. The new test will be put on the pump this week.

The wildcat producer, though comparatively small in output, proved a bright spot during a week which added 10 dry holes and one abandonment, seven oil producers with an aggregate initial exceeding 1,000 bbls. daily and four gassers, increasing the state's open flow capacity by 117,677,000 feet.

Geneva-Midland

Another possible discovery well of a Dundee pool in Geneva Township, Midland County, where only the Traverse limestone completed tests, was rated good for 10 bbls. a day naturally.

It was Robert Bond and A. T. Wright No. 1 Virgil McClintic and others, NW [illegible] NE section 29-15n-2w, on which drilling was suspended when the hole started to fill with oil week before last, after penetrating the lower limestone about 40 feet. Dundee was topped at 3,629 feet.

Brehm-Hollman Oil Corp. had not yet abandoned hope for Dundee production in No. 1 B. F. James estate, NW SW NW section 20, same section, which struck a show and was treated at 3,670 feet, or 7 feet in the limestone.

A third attempt to develop Dundee oil production in the same area, Brehm-Hollman and Skinner & King No. 1 Rosselit & McCormick, NE NE SW section 20, same township, also had reached about 3,000 feet and was expected to test the Dundee this week. Six other tests were active in the play developed during recent weeks in Geneva Township.

Wildcat Show

T. F. Caldwell, Inc., No. 1 Mutch, NE SE SE section 17-19n-4e, Deep River Township, Arenac County, test in northeastern Michigan, also struck about 250,000 feet of gas in the Berea and a 5- to 10-bbl. show of oil in the Traverse but continued drilling to the Dundee. Gas was found from 1,494 to 1,500 feet, Traverse at 1,956 feet and oil 10 feet in. Dundee was expected between 2,700 and 2,800 feet.

Midland County

Midland County led the rest of the state in oil completions last week, accounting for five Dundee producers making an aggregate initial of 765 bbls.

Though first drilled into the pay sands nearly four weeks ago, Roosevelt Oil Co. No. 9 Campbell, NW NW NE section 17-13n-1w, Porter Township, was not placed in the completion column until it made 400 bbls. daily as the largest new producer in the state's largest pool in several months. It was treated with 250 gallons of acid.

Pure Oil Co. No. 24 Mina C. Narmore, C S SE NW section 15, same township, made about 100 bbls. a day at 3,415 feet.

Pure also completed three tests in the Jasper-Yost area adjoining Porter for an aggregate of 265 bbls. daily. No. 3 J. B. Balch, C N SW SE section 2-13n-2w, Jasper Township, flowed 135 bbls. a day after acid treatment at 3,446 feet, total depth. No. 3-C Iva E. Bond, C S SW NE section 12, same township, made 70 bbls. naturally and was to be acid treated at a total depth of 3,440 feet. No. 3-B Ann Corning estate, S N NE SW section 12, acidized at 3,449 feet, was rated at 60 bbls. a day.

Same company's No. 3-A Ann Corning estate, C S SW NE section 1, had been drilled into the Dundee oil sands to a total depth of 3,438 feet and was being treated for commercial production.

Operators were still testing Ward Blunt No. 2 Don Harrison, NE SE SW section 18-14n-2w, Greendale Township, treated with acid for a show of oil and gas at 3,590 feet.

Joseph Trever No. 1 Forbes, SW SW SW section 22, Porter Township, finally was abandoned as a dry hole after many weeks of testing.

Red-Man Oil Co. No. 1-B Seeley & Bernard, C N S SE section 9, Greendale, neared the Dundee drilling at more than 3,200 feet.

Crystal-Montcalm

Two new Dundee producers, one of them the best for several months, were completed in the Crystal field, one in Crystal and the other in Ferris Township.

The larger was T. F. Caldwell, Inc., No. 8 Jesse Flint, NW SE SW section 35-11n-5w, Ferris Township, which made about 240 bbls. daily initially after acid treatment. Rex Oil & Gas Co. completed a long fishing job and drilled into the Dundee for 20 bbls. initially at 3,195 feet, 10 feet below the casing. It was being tubed to pump.

Three dry holes were added to the Crystal record, two in Crystal Township and one in Ferris. The latter was Daily Crude Oil Co. No. 4 John Flint, NW SW SE section 35, which failed after topping Dundee at 3,201 feet, drilled to 3,209 feet, plugged back and redrilled. It was finally plugged and abandoned. J. W. Leonard, Jr., trustee, No. 2 Floyd Jarfster, NW SE NE section 11, Crystal, was abandoned at 3,204 feet, or 6 feet in the Dundee, while Rowmor Corp. No. 1 Spencer, SE SE NW section 10, a possible southwest extension test, struck water after topping the Dundee at 3,197 feet.

Fortney Oil Co. No. 3 Elva Rockelman, SW SW SE section 11, Crystal Township, also was considered a 70-bbl. completion though pumping considerable water from the Dundee, while the same company's No. 5 H. J. Fisher, SE NE NE section 2, same township, was still testing in the Dundee.

Five other tests were completing in the two townships, two in Crystal and three in Ferris.

Denver-Isabella

McClanahan Oil Co. brought in a 50-bbl. well, completing the No. 2-A State, SE NE SW section 34-15n-3w, Denver Township, Isabella County, with possibilities of increasing the flow after further testing.

Seven other tests were active in this older field, where a new play recently has developed because of dropping crude production and the prospects for larger wells after acidizing than were brought in when the Leaton pool was first developed six years ago.

Beaverton-Gladwin

Daily production of Goll, Graves & Mechling No. 1 Oard, which several weegs ago opened a new field in section 25-18n-1w, Buckeye Township, Gladwin County, was boosted to about 100 bbls by a second acid treatment.

The Oard test made 15 to 30 bbls. initially from oil sands first encountered 63 feet in the Dundee topped at 3,496 feet. The test was finally drilled 184 feet in and plugged back 23 feet before the first acid shot, which increased the flow to about 60 bbls. a day.

Though no new tests have been started in the vicinity, about half a dozen tentative locations have been made.

M. F. Whitehill No. 1 Bardwell, NE NE SE section 3-17n-2w, Beaverton Township, Gladwin County, field, struck water in the Dundee after encountering a light show of oil. It was planned to plug back to treat the show with acid. Same company's No. 1 Brown, SW SE NE section 2, was nearing Dundee drilling at about 3,200 feet.

Gassers

Four gassers, three in the Tri-Townships field in Belvidere Township, Montcalm County, and Millbrook Township, Mecosta County, and one in the New Haven Township field of Gratiot County, added 117,677,000 feet combined open-flow capacity daily last week.

Largest of the four was Ide & Glavin No. 1 T. F. Wilson, C NW NW section 10-12n-7w, in Belvidere, which gauged 58,000,000 feet daily in the Michigan Stray sands. It is two locations diagonally southwest of Gordon Oil Co. No. 2 Carl Loughlin, C NW SE section 4, Belvidere, which gauged 72,800,000 feet after being estimated 100,000,000 feet when blowing wild.

Kinwell Oil and Muskegon Development Co. No. 2 L. M. Fleck, C NW NE section 15, Belvidere, gauged 26,322,000 feet daily from the Michigan Stray as the second new gasser of the week in this part of the field. It was drilled on a peninsula in one of the six lakes for which the nearby village of Six Lakes, Mich., was named.

The third new gas well in the Tri-Townships field was Stewart-Atha, Inc., No. 2 Amsden, C SE SE section 31-13n-7w, Millbrook Township, Mecosta County, which made 25,000,000 feet a day in the shallow gas sands.

F. V. McCollister No. 1 Joass, SE NE SE section 8-15n-10w, Big Rapids Township, Mecosta County, proved a disappointment in the Dundee after promising shows of oil in the upper and lower Traverse. It filled several hundred feet with water and drilling was discontinued at 3,494 feet.

Three Belvidere and Millbrook Township gas tests were completing in the state's largest gas field where drilling activities recently have been considerably slowed down as testing of proved acreage nears an end.

The Gordon-Loughlin well boosted the total initial open flow of 16 wells in section 4, Belvidere Township, Montcalm County, not counting increases from deepening, to nearly 600,000,000 feet, the largest of any section in the state. The smallest producer in the section when brought in now has an open flow rating of 41,000,000 feet.

American Production Co. brought in the eighth producer in the New Haven-Gratiot field, east of the Crystal oil pool, when No. 1 Ben Shaver, C NE SE section 4-10n-4w, flowed at the rate of 8,355,000 feet daily from the Michigan Stray sand topped at 935 feet and drilled to 985 feet, or 22 feet in the pay.

Oil Finders, Inc., No. 1 Stahl, NW NW NW section 28-11n-2w, an Emerson Township, Gratiot County, oil

(Continued on Page 129)

California Field Report

By
L. P. STOCKMAN

COYOTE FIELD IS EXTENDED; NORTH BELRIDGE'S BIG WELL

LOS ANGELES, Calif., Aug. 17.—Shell Oil Co. is expected to finish its second well in the Stevens or Ten Section field of Kern County within 30 days, as No. 2 Stevens, on property leased from the Kern County Land Co., is within 500 feet of the projected completion depth. It is probable that Shell will take in more productive formation than was done in the discovery well, which is still holding up with clock-like regularity. In order to enhance curtailment, this well was severely beaned back and will probably be kept under restraint for some time. The Shell's gathering line from the Stevens area to Bakersfield is nearing completion and should be in operation before completion of the second well in this new field. The natural gasoline plant which the company is erecting in the Stevens area should also be in operation within a few weeks. A sufficient number of steel tanks are being erected at the Bakersfield tank farm to take care of production from the Stevens field pending completion of the company's pipe line between Bakersfield and Coalinga.

DeAugustine, Abrams and Daily Oil Co. have substantially extended the eastern limits of the East Coyote field of Los Angeles Basin as the extension well of these operators is approximately 3,000 feet beyond proven limits of production in the eastern end of the structure. This outpost was completed a fortnight ago flowing 260 bbls. of exceptionally clean 22.9 gravity oil from 2,811 feet. It blew in during a water shutoff test on the 8⅝-inch landed at 2,739 feet and production has built up to 460 bbls. per day. The extension well, No. 1 Barnett, is west of a duster drilled on the Carlton property by the Continental Oil Co. and abandoned a few months ago at 4,796 feet. The Continental is at present rechecking its data on this area and will drill another test if the outcome of this work proves favorable.

Oxnard

Vaca Oil Co. is drilling an interesting wildcat in the Oxnard district of Ventura County, and this test, located in section 6-1-21 on property leased from the California Lands Co., drilled through a tar zone at approximately 1,800 feet. The bit is rotating at 2,201 feet and company officials expect to conclude drilling around 2,500 feet unless geological conditions are favorable to continue. Vaca Oil Co. is controlled by the John Hays Hammond interests and the structure has been completely outlined by geophysical exploration. The General Petroleum has reached 9,007 feet in No. 2 McGrath, a wildcat in the Oxnard district in section 26-2-23. This is the second test drilled by the General Petroleum near Oxnard in Ventura County and neither has shown any unusually favorable conditions.

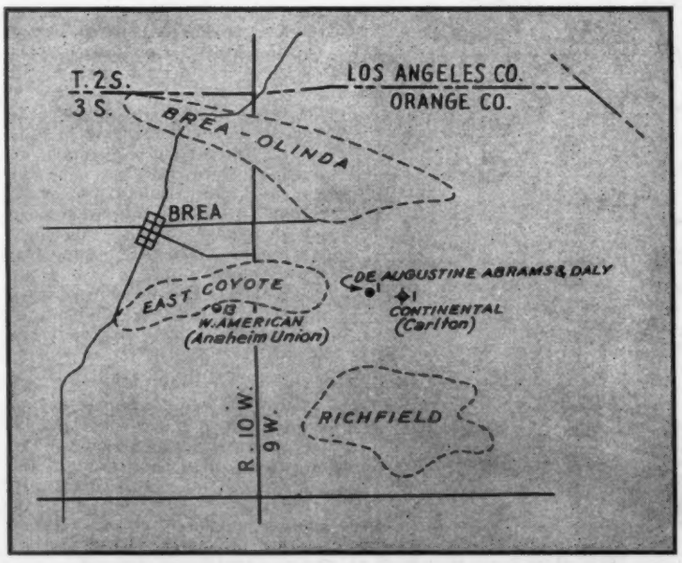
In the Javon district of Ventura County the Continental Oil Co. has started rig construction for a second well on the Hobson lease in section 15-3-24. General Petroleum Corp. has erected a new rig on the Padre lease and the Chanslor Canfield Midway Oil Co. has started building road to a location on the Oakgrove property in section 23-3-24. The latter company has started reconditioning work on No. 4-A Hobson, completed several weeks ago as a small pumper from 4,750 feet. The crew is fishing for liner and tentative plans call for a resumption of drilling to deepen the hole and test the productivity of the second zone encountered by the Continental Oil Co. in its discovery well. In the Bardsdale district of Ventura County the Union Oil Co. is conducting an exhaustive production test on No. 10 Dryden, a deep well in section 12-3-20, and although this test has several hundred feet of productive formation, only small production has been developed. The producing zone consists of a tight formation and a consequent poor porosity. The Texas Co. has started rig construction for a wildcat on the Lloyd-Butler property in the Saticoy district of Ventura County, and this test, in section 1-2-22, will be spudded before the close of the month. The Associated Oil Co. has begun road construction for a wildcat in the Wiley Canyon district of Ventura County and drilling is scheduled to start on or before September 1. Location of the Associated's new wildcat in section 6-3-18 was announced as being 2,700 feet south and 500 feet east of the NW cor. of the section.

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	August 2		July 26			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	151,541	527,098
Gasoline	.....	.....	264,579	37,797	3,994,742	4,777,103
Kerosene	.....	.....	.....	.....	888,702	753,457
Foreign exports:						
Crude oil	242,446	34,635	235,095	33,585	5,569,950	7,776,516
Fuel oil	232,284	33,183	157,990	22,570	6,267,820	7,311,018
Diesel and gas oil	189,986	27,141	64,096	9,157	3,609,525	2,641,016
Gasoline	76,280	10,897	87,416	12,488	4,310,069	3,859,505
Kerosene	6,025	861	.....	.....	881,553	813,478
Other unfinished oil	.....	.....	.....	.....	112,788	99,847
Coastwise-domestic:						
Crude oil	.....	.....	169,169	24,167	3,938,496	3,411,553
Fuel oil	237,035	33,862	182,561	26,080	5,610,577	5,676,444
Diesel and gas oil	43,151	6,164	12,765	1,824	818,204	597,529
Gasoline	397,929	56,847	251,531	35,933	7,775,544	6,349,554
Kerosene	.....	.....	3,557	508	131,782	121,980

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	.....	157,258
Gasoline	.....	.....	.....	.....	227,419	.....
Kerosene	.....	.....	.....	.....	.....	149,715
Asphalt	.....	.....	.....	.....	138,097	348,064
Lubricants	.....	.....	2,359	337	34,084	35,172
Foreign exports:						
Crude oil	165,566	23,752	100,771	14,396	2,108,005	1,465,651
Fuel oil	59,017	8,431	28,590	4,084	1,668,558	1,253,800
Diesel and gas oil	.....	.....	163,049	23,293	1,083,307	731,609
Gasoline	77,853	11,122	59,201	8,457	2,315,298	1,911,189
Kerosene	4,742	677	17,116	2,445	459,729	483,712
Lubricants	.....	.....	.....	.....	203,169	136,399
Coastwise-domestic:						
Fuel oil	.....	.....	136,029	19,433	4,018,311	3,940,554
Diesel and gas oil	36,311	5,187	.....	.....	443,271	141,667
Gasoline	140,284	20,041	113,642	16,235	3,113,282	2,752,550
Kerosene	.....	.....	.....	.....	102,798	64,054



The East Coyote field in Orange County has been extended 3,000 feet easterly. The extension well had an initial production of 260 bbls. a day at 2,811 feet

Santa Maria

The Union Oil Co. No. 1 Bettiga, in the Santa Maria Valley field, discovered by the Union Oil Co., proved somewhat of a disappointment upon completion a few days ago, as it was brought in on the beam pumping 151 bbls. of 16.1 gravity oil per day from 2,578 feet. This well, east of No. 1 Adam in section 24-10-34, cored over 100 feet of oil sand and was bottomed in Franciscan rocks. The Union has a rig standing for No. 1 Mahoney in section 24-10-34, and present plans call for immediate development. Shell Oil Co. has concluded drilling No. 17 Covarrubias in the Capitan field of Santa Barbara County at 3,160 feet and a production test will be made within the next few days. The General Petroleum should also make a production test in this field shortly as No. 16 Erburu has been finished at 2,751 feet. No notable progress was made by the Associated Oil Co. or General Petroleum Corp. in their respective deep wells in the Ventura Avenue field which have been hung up with mechanical trouble for several months. Both wells were originally completed in the deep 57 zone below 9,500 feet.

East of the Playa Del Rey field in Los Angeles Basin, the Eastern Oil Co. developed a flow of hot salt water in No. 1 D.R.L.&W. and the hole was plugged back from 7,562 feet to 7,482 feet. The water produced was very hot as the temperature at the bottom of the hole was 275° F. This wildcat looked rather favorable while drilling, but for some reason has failed to result in commercial production. There is a possibility that the heavy gas pressure originated in the shallow dry gas zone known to exist in this area. This possibility is further supported by the action of the well in producing large quantities of mud after the first string of casing had been landed. The bottom of the hole consisted of an oil sand, a conglomerate and nodular shale which tends to confirm the belief that the mud

produced was coming down from above the shoe of the water string.

Belridge

In the North Belridge field of Kern County, the Belridge Oil Co. finished an exceptionally good well when No. 17-35 in section 35-27-20 was brought in flowing 4,498 bbls. of exceptionally clean 30.8 gravity oil and 3,526,000 feet of gas per day. It was bottomed at 8,391 feet and came in barefoot under complete control. It has been beaned back to 865 bbls. per day and the tubing and casing pressures are 1,090 pounds and 1,795 pounds, respectively. Top of the Wagonwheel zone was logged at 8,166 feet and top of the oil sand was encountered at 8,342 feet. Associated Oil Co., drilling its fifth deep well on the Reward property in section 34-27-20, is nearing the 8,000-foot level in No. 5 Reward and should have this potential producer ready for a production test within a month. Associated Oil Co. and Shell Oil Co. are expected to begin actual drilling soon in the eastern extension of the Mountain View field, which was proven productive by No. 1 Earl Fruit of the Mohawk Petroleum Co. in section 10-31-29. The Mohawk's extension well is back on production again flowing 180 bbls. of relatively clean 36.1 gravity oil daily. Shell is offsetting this property on the south and Associated's No. 2 Giorgio, in section 3-31-29, will be a direct offset on the north of Mohawk's No. 1 Earl Fruit. In the older section of the Mountain View field, the Allied Petroleum Co. completed No. 19 in section 19-30-29, brought in flowing 300 bbls. of clean 24.4 gravity oil per day from 5,093 feet after the hole had been plugged back from 5,102 feet. Upon completion of this well, the company started rig construction for No. 20.

Two new wells were completed in the Mount Poso field of Kern County during the week, and another, the Bell Corp. No. 1 Fitzhugh, in section 14-27-27, should be tanking oil within a few days. No. 1 Fitzhugh produced approximately 100 bbls. of oil during bailing operations and the company is making preparations to complete it on the beam. Shell Oil Co. completed No. 17 Security in the Mount Poso field pumping 226 bbls. of clean 16.1 gravity oil from 1,855 feet and is installing pumping equipment on No. 16 Security preparatory to an early test. In section 32-26-28, the McAdams Oil Co. completed a small pumper when No. 1 Bellport was put on the beam following completion at 1,880 feet after the hole had been plugged back from 1,902 feet. No. 1 Bellport showed an initial daily production of 20 bbls., the oil being relatively clean and testing 15.4 degrees A.P.I.

Kettleman Hills

In the Kettleman North Dome field Standard Oil Co. and the Kettleman North Dome Association each completed a well and should have several more ready for production tests in the immediate future. Kenda's new producer was No. 83-32-J in section 32-21-17 and Standard's new well was No. 65-19-J in section 19-21-17. The former was brought in flowing 2,160 bbls. of exceptionally clean 36.1 gravity oil and 2,000,000 feet of gas per day, while the latter was completed flowing 998 bbls. of clean 36.3 gravity oil and 600,000 feet of gas daily. Kenda No. 83-32-J was bottomed at 8,290 feet and finished with a 4¾-inch liner carrying perforations at 7,830-8,287 feet. Standard No. 65-19-J was finished at 8,346 feet and is flowing through 3½-inch tubing. The Union Oil Co. has resumed work on No. 1 Lillis-Welsh, which was carried down to 11,147 feet before work was suspended several months ago. The company is plugging back the hole and will attempt to develop commercial production by selective perforating. Late this week No. 1 Lillis-Welsh produced approximately 100 bbls. during the course of work. This oil is coming from a point relatively high up in the hole and the well's action is therefore rather surprising.

In the Round Mountain field of Kern County, Honolulu Oil Corp. finished No. 54 in section 18-28-29 pumping 352 bbls. of relatively clean 14.5 gravity oil per day from 1,892 feet and made 1,596 feet of hole in No. 37, located in the same area. Shell has two potential producers nearing completion in the Round Mountain field and since both are being rigged to pump they should be tanking oil within a few days. The Tejon area of Kern County is receiving a careful check by prospectors and the outlook for development of production in this section looks brighter than at any time up to the present. Reserve Oil & Gas Co. has cored a promising oil sand in its No. 33-2 in section 33-11-19 at 4,490 feet and preparations are being made to make an immediate formation test. About 40 feet of formation has been encountered although not all of it is oil sand. Other operators testing this district include Associated Oil Co. with a wildcat in section 17-11-19; Hall-Baker with a test in section 12-10-19, and the Ohio Oil Co. with a well going down in section 36-11-19.

Wilmington

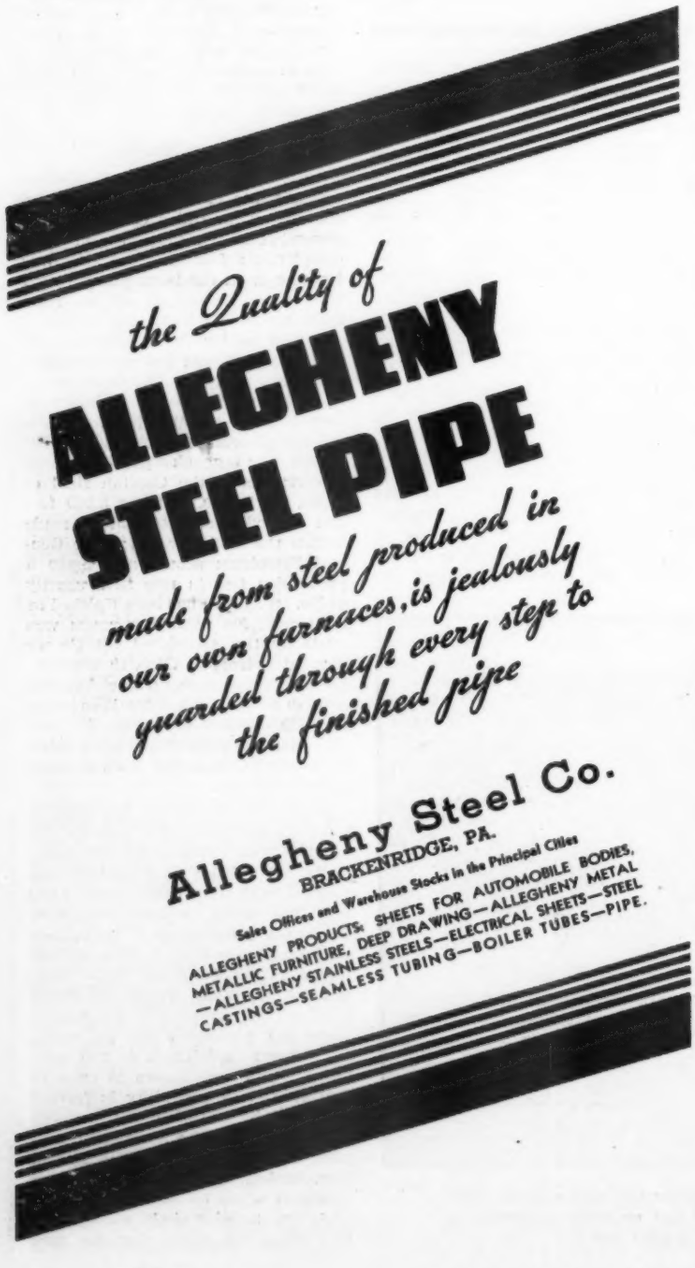
The Wilmington district of Los Angeles Basin is rapidly becoming an exceptionally active area, and with the starting of several new tests this week the district takes rank with other similar areas throughout the state. Bankline Oil Co. has made a location in section 34-4-13 and the Sovereign Oil Corp. is making plans to start immediate drilling in section 28-4-13. General Petroleum Corp. is building rig for No. 2 Terminal and has started road construction to the site of No. 3 Terminal which will be spudded in some time within a fortnight. The Wilmington district has yielded a number of relatively small pumping wells over a large area but has yet to contribute a fairly large flowing well. Royalty Service Corp. has completed No. 1 Banning in this section, brought in pumping 106 bbls. of 15.1 gravity oil per day from 3,650 feet. In the Redondo section of the Torrance field the Petrol Corp. has completed No. 2 Simmons, brought in pumping 340 bbls. of 17.3 gravity oil per day from 3,610 feet. George K. Linderman No. 2 Redondo in this field was finished pumping 138 bbls. of 14.6 gravity oil daily from 3,734 feet.

On the west front of the Kern River field, the Chanslor Canfield Midway Oil Co. has completed No. 50 in section 23-28-27, brought in pumping 210 bbls. of 15.7 gravity oil per day from 2,150 feet. Production was still cutting about 15 per cent at last reports but may clean up after the well has been on production for a few days longer. Republic Petroleum Co. No. 5 Fleishacker, in section 11-28-27, drilled into a fault at 2,050 feet and is being abandoned. In the Edison field of Kern County, the Wood-Callahan Oil Co. finished No. 2 Gerard in section 23-30-29 and got a well good for 140 bbls. per day from 2,075 feet. The Fruitvale field contributed a new well when Mohawk Petroleum Co. finished No. 23-1 in section 23-29-27, which was brought in on the beam pumping 135 bbls. of 21.8 gravity oil per day from 3,742 feet. The output of this well registered a water cut of 18 per cent. Exeter Oil Co. is making preparations to drill out the cement in its No. 1 Henry in section 21-29-27 and a production test should be made within another few days. This is the first well to be drilled by this company in several years. Western Gulf is expected to finish two wells in the Fruitvale field within another week as No. 2 Lahore and No. 4 Red Ribbon have been passed for production tests.

In the Midway-Sunset field of Kern County, the North American Oil Consolidated Co. finished a small well when No. 2 in section 2-32-24 was brought in pumping 50 bbls. of 26.9 gravity oil per day from 4,337 feet. Although no definite plan has been announced, tentative arrangements have been completed whereby an operator in the Buena Vista Hills section of the Midway-Sunset field will drill a deep test within another 60 days. This area was recently brought under a unit plan whereby drilling and production activities will be unitized in the future. This unit plan includes only those deeper productive horizons which may be discovered below present productive zones. This constructive move will prevent waste of oil and gas which might result in the event that deeper zones might later be discovered and should tend to stabilize production by preventing competitive drilling.

I.T.I.O. Banquet

The officials of the Indian Territory Illuminating Oil Co. gave a banquet on the evening of August 18 at the Oklahoma City Country Boarding House in the field to about 125 employes of District 3, Oklahoma City field, in recognition of this group having had no serious accident within the past six months.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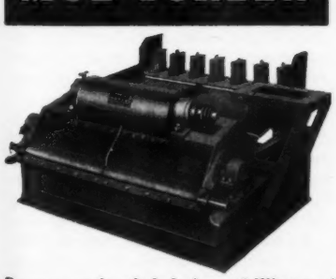

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C & C Drilling Co. completed Houston Oil Co. No. 1 Helberg and Lackner at Eureka in Harris County for a large gas well. It was washed in from a depth of 7,676 feet and flowed 2,500,000 feet of gas per day through a three-sixteenths inch choke which developed a leak in the connection and the well has been killed. In the meantime a rig has been moved to the Shepherds Mott dome in Matagorda County for Cockburn Oil Co. No. 8 Hawkins.

Ben (Bud) Coyle has cemented a string of 7-inch casing at 6,651 feet in No. 1 State at the Jeanerette field and has a fishing job at No. 1 Barrileaux, which is bottomed at 8,258 feet. Both wells are being dug for Herton Oil Co. To the east on the Charenton prospect, Mike Hogg and others No. 1 Laws Realty Co. is coring in sand with an odor of oil and gas below 8,500 feet. Four drill stem tests made at higher levels have shown oil and gas giving possibilities of opening a field.

Cron & Gracey received contract from Sinclair Prairie for another test at Damon Mound and have six other active rigs as follows: One at St. Martinsville for Continental Oil Co., one at Manvel and West Columbia for Texas Co., one at South Houston for Stanolind Oil & Gas Co., one at Placedo for Barnsdall Oil Co. and one at the Hitchcock prospect in Galveston County for Shell Petroleum Corp.

Glenn H. McCarthy opened a field on the Cotton Lake prospect, Chambers County, by the completion of his No. 1 Kilgore at a depth of 6,308 feet for an initial production of 14 bbls. per day. His No. 2-B Longe at Amelia has been spudded and he has two other rigs running in the Anahuac field for Humble Oil & Refining Co.

Nicklos Drilling Co. has abandoned Pan American Production Co. No. 5 United Land at the Sorrento dome in Ascension Parish and is moving the rig to another location. For the same company at Port Barre, No. 2 Hass & Hirsch is being prepared for a completion test. At Tepetate, for the Continental Oil Co., No. 5-A Homeseekers Development Co. has been completed for a producer but is being worked over and No. 2 Klump is drilling below 8,076 feet.

Rutherford Drilling Co. has cemented a string of 7⅝-inch casing on bottom at 7,500 feet on No. 2 Metzger at the Van Vleck field in Matagorda County after a 10-minute drill stem test from 7,497-7,500 feet showed 50 pounds of pressure and 960 feet of oil. In the meantime progress is being made on two other wells, No. 9 and 10-C Cobb.

Smith & McDannald have moved in a rig for No. 2 Lamb at the South Houston field and received three new contracts for wells the past week. They are located at the South Houston, Long Lake and Louise fields and are being drilled for Stanolind Oil & Gas Co., Pure Oil Co. and Tide Water Oil Co.

Loffland Brothers have plugged back to straighten the hole on Continental Oil Co. deep test in Vermilion Parish. It was drilled to 11,505 feet and has been plugged back to 10,947 feet.

On the Labella prospect, Jefferson County, Sun Oil Co. has abandoned No. 1 Hebert and Broussard at a plugged back depth of 8,242 feet after it tested salt water with no show of oil and gas in sand from 8,230-42 feet. The hole was originally drilled to 9,842 feet where it encountered heaving gas pressure which stuck the drill stem that resulted in the hole being plugged back. Northeast of Port Arthur, C. W. McPhail and others have spudded No. 2-B Owens, a wildcat in Lot 2, Block 9, Range H, of the Port Arthur Land Co. in the Joseph Grigsby Survey.

Harrison and Abercrombie tour on location at the Placedo field in Victoria County. Standing left to right: M. V. Case, N. B. Trentham, Bob Clark, and Carl Daly, driller. Numerous wells have been drilled to the 4,700-foot sand by this crew in 3½ days drilling time

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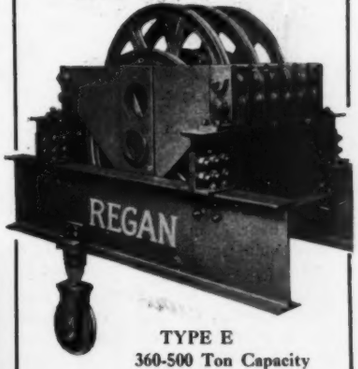

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Eastern Field Report

By STAFF CORRESPONDENT

LARGE GAS WELL STIMULATES INTEREST IN ORISKANY TESTS

PITTSBURGH, Pa., Aug. 17.—The largest gas well completed in recent times in the lower eastern fields was brought in in the Oriskany field in Kanawha County, West Virginia. In Elk district, S. B. Avis, trustee, completed the test on the Kanawha Valley Bank lease (Grant Copenhaver 147-acre tract) in the Oriskany sand at a total depth of 4,928 feet. It gauged 12,600,000 feet a day a few feet in the sand and it is rated the largest gasser since Big Moses. It is on the Milliken anticline about 1,500 feet due south of No. 2 gas well on the G. and D. Copenhaver farm.

This large strike, together with the announcement of new deep tests starting in other sections of West Virginia and Southwest Pennsylvania adds interest to the development of the deeper sands. In Wirt County, West Virginia, Godfrey L. Cabot, Inc., has a rig completed on the Julia Blankenship farm in Spring Creek district which is scheduled for a depth of 6,000 feet unless an intervening pay is struck. It is just east of Creston where West Fork unites with the Little Kanawha River and is east of the Burning Springs anticline and just west of the trough of the Middlebourne syncline. To the south is the great arch formed by the Burning Springs anticline, the Middlebourne syncline and the Big Moses anticline.

New Deep Tests

In Southwest Pennsylvania, two new deep tests are listed. About 1 mile north of Zelienople in Butler County, American Natural Gas Co. and T. W. Phillips Gas & Oil Co. are hauling in material to drill a deep test to the Oriskany sand on the Paul A. Fanker farm. It is found on the Zelienople Quad 1¼ miles south, 80 degrees east, of the Furnace School.

In Slippery Rock Township, Lawrence County, Carnegie Natural Gas Co. is building a rig for a deep test on the Heickel (J. B. Hauk) farm, also scheduled for the Oriskany sand. It is 2 miles west, about 5 degrees south, of the town of Princeton and is also 3.8 miles due southeast of the dry hole drilled to the Oriskany sand on the Munnell farm. In this test the total depth was 4,767 feet with the sand at 4,635-81 feet.

Adding intense interest to the deeper drilling is the report that the deep test of Willian Snee and others on the Summit Hotel property in South Union Township, Fayette County, is nearing the Oriskany sand. The top of the Onandaga (cherty lime) was struck at 6,560 feet and it is drilling at 6,589 feet. The lime here may be about 50 feet thick. The test is on the south side of U. S. 40 just below the hotel to the west.

Thirty operations were completed in the lower eastern fields during the week of which 9 were dry holes, 12 gas wells and 9 producers with an initial production of only 63 bbls.

SOUTHEAST OHIO

The deep test of Natural Gas Co. of West Virginia on the W. Strudehoff farm in section 31, Madison Township, is nearing completion. Unable to recover the tools lost in the hole on top of the Oriskany sand, they were cemented in and drilled by. At 4,376 feet there was a 1-foot strata of sand and again lime. It is drilling at 4,402 feet and should reach completion this week. The other deep test drilling in Columbiana County by this company on the Morris Fiengold farm in the SW quarter of section 19, Madison Township, is down 350 feet. In section 25, Wayne Township, this company has recovered the tools and is casing at 800 feet in the deep test on the William Grafton farm.

In Athens County, Carpenter & Glazier drilled two wells on the John Smith farm in section 13, Ames Township, both dry. No. 10 went through the Peeker sand at 157 feet and No. 11 at 101 feet.

In Licking County, McClay Brothers completed a test on their acreage in the NE quarter of section 24, Fallsbury Township, in the Clinton sand at a total depth of 2,868 feet. It filled up 1,200 feet the first 48 hours after shot and will make a small pumper. In section 11, Mary Ann Township, Preston Oil Co. completed a test on the F. R. Baughman farm in the Berea sand at 730 feet, a 1-bbl. pumper. In this section, Gale Early completed a second test on the George Wilson farm as a 1-bbl. pumper from the Berea sand at 741 feet.

In Lorain County, Ohio Fuel Gas Co. drilled on the W. E. Roth farm, section 82, Eaton Township, through the Clinton sand to 2,730 feet. It was dry.

In Meigs County, Leroy Holmes and others completed No. 3 on the Wilber Bradford farm, Lot 1,179, Lebanon Township, in the Berea sand at 2,000 feet. It is a gas well gauging 300,000 feet a day.

In Noble County, C. W. Rich and others completed a test on the Allie Findley farm in the NW quarter of section 18, Seneca Township, in the Big Injun sand at a depth of 926 feet. It is a gas well gauging 475,000 feet a day and is in the old Chaseville pool which operated about 20 years ago and is second crop production.

SOUTHWEST PENNSYLVANIA

One small gas well and one dry hole were reported from Southwest Pennsylvania. In Morris Township, Greene County, 1 mile west of Sycamore, Manufacturers Light & Heat Co. completed No. 2 on the Anna Wolf farm at a depth of 2,871 feet. The Fifty-Foot sand was at 2,758-85 feet and showed about 110,000 feet of gas.

In Whiteley Township, Greene County, Equitable Gas Co. drilled on the Elizabeth Johnson farm to 3,328 feet and it is being plugged, having only a small gas showing.

In Mount Pleasant Township, Washington County, the deep test of Norwood Johnson and others on the James McBurney farm is drilling at 5,805 feet. A very hard lens was struck and drilling is very much retarded.

In Amwell Township, Washington County, Union Gasoline & Oil Corp. is down 850 feet and running 10-inch casing in No. 3 on the A. O. Vankirk farm. Its test on the Stephen B. Day farm is drilling. The rig for the second test on the Marion C. Johnson farm is building. South Penn Oil Co. is rigging up the second test on the J. Q. Zimmerman farm. New Oil & Gas Co. is building rig on the W. Dodd farm. Bloom & Bloom are building a rig for the second test on the Clyde Hinerman farm.

In Peters Township, Washington County, R. M. Duden and others are drilling at 1,740 feet on the Elmer Johnston farm. In South Franklin Township, Union Gasoline & Oil Co. is down 2,737 feet on the H. R. Post farm. Carnegie Natural Gas Co. is spudding No. 2 on the N. B. Redd farm, and building the rig for No. 2 on the R. M. Carrons farm.

In Morris Township, Washington County, Manufacturers Light & Heat Co. is drilling at 1,100 feet on the D. Craft farm. In East Findley Township, Union Gasoline & Oil Corp. is hauling material for No. 6 on the J. N. Clutter farm.

In Greene County, Smith B. McCracken is rigging up the Homer Krug farm in Richhill Township. Carnegie Natural Gas Co. is setting cement at 1,759 feet on the W. O. Kincaid farm. Equitable Gas Co. is building rig on the Rachel McDonald farm. Natural Gas Co. of West Virginia is drilling at 1,000 feet on the N. P. Headley heirs farm.

In Monongahela Township, Greene County, Greensboro Natural Gas Co. is moving in a rig on the Israel Barkley farm. In Dunkard Township, Convex Glass Co. is down 1,926 feet on the Leroy McClarnan farm. The Big Injun sand was at 1,768 feet, with a gas show at 1,888 feet.

In Center Township, Greene County, Carnegie Natural Gas Co. is drilling at 2,210 feet on the J. W. Milliken farm. South Penn Oil Co. is milling a pin on the 5-inch tools in No. 9 on the Charles Harvey farm.

WEST VIRGINIA

There were several producers completed in West Virginia. In Ritchie County, South Penn Oil Co. completed No. 16 on the Haught Lambert farm in Murphy district in the Salt sand at 1,872 feet, good for 25 bbls. a day.

In Hancock County, R. J. Braden Co. completed No. 25 on the Hewitt heirs farm in Grant district in the Berea sand at 985 feet. It is showing for 3 bbls. a day.

In Pleasants County, Thomas H. Johnson completed a test on the J. M. Ruckman farm in Jefferson district in the Cow Run sand at 610 feet with a small oil showing. In Lafayette district, W. J. McCullough drilled on the R. H. Wilson farm through the Maxon sand to 1,635 feet and it is dry. In Union district, Homer Smith drilled a test on the Smith heirs farm through the Squaw sand to 1,910 feet and it was dry.

In Roane County, H. S. Adams completed a test on the G. B. Norman and others lease in Curtis district at a total depth of 1,851 feet good for 5 bbls. a day. The Gas sand was at 1,365-1,530 feet; Salt sand at 1,799 feet with oil at 1,821-48 feet.

In Wetzel County, Union Gasoline & Oil Corp. completed No. 3 on the E. P. Oliver farm in Church district as a 10-bbl. producer at a total depth of 3,054 feet, the Gordon sand. The Pittsburgh Coal was at 868-877 feet. There was also about 55,000 feet of gas.

Gas Wells

In Cabell County, W. C. Kingery and others completed a test on the C. & O. Railroad on the Guyandotte River in McComas district at a depth of 1,326 feet. Big Lime was at 1,086-1,250 feet; Big Injun sand at 1,320 feet, with 3,372,750 feet of gas at 1,323 feet.

In Braxton County, Pittsburgh & West Virginia Gas Co. completed a test on the W. A. Ramsey farm in Birch district in the Injun sand at 2,127 feet. It is a gas well gauging 250,000 feet a day and some oil.

In Marion County, Victor E. Tennant completed a test on the Mrs. E. Kuhn farm in Lincoln district at a total depth of 2,502 feet. The Fifty-Foot sand was at 2,495 feet and it is a gas well gauging 783,000 feet a day.

In Monongalia County, Dunn Mar Oil & Gas Co. completed No. 3 on the N. Tennant farm in Clay district in the shallow Little Dunkard sand at 840 feet as a gas well gauging 100,000 feet a day.

In Ritchie County, W. H. Mossor completed a test on the W. R. Wright farm in Murphy district as a gas well in the Injun sand at a depth of 1,814 feet and gauging 432,000 feet a day. W. A. Bickerstaff completed a test on the E. L. Summers farm in the Berea sand at 2,340 feet gauging 100,000 feet a day. In Grant district, W. B. Corey drilled on the Matilda Redfox farm through the Injun sand to 1,812 feet. It was dry. In Clay

(Continued on Page 130)

West and North Texas

By
L. E. BREDBERG

NEW POOL IN COOKE COUNTY ASSUMING REAL IMPORTANCE

FORT WORTH, Tex., Aug. 17.—Locations increased in the West Texas district this week to 48, 7 of which were for wildcats, several for semi-wildcats and the remainder in proven fields. At the same time 37 wells were completed, 6 of which proved dry, either in wildcat or semi-wildcat territory. An extreme wildcat location was announced by the Plateau Oil Co., on the the Hatch ranch, in section 66, Block B. H.E.&W.T. Survey, Edwards County. Another interesting test for the Edwards Plateau region is to be sunk by J. W. Cooper who several months ago completed a 13,000,000-foot gasser in the Pennsylvanian, in section 40, Block L, G.G.&S.F. Survey, about 9 miles southeast of Eldorado in Schleicher County. The well also made from 10 to 12 bbls. of high gravity oil per day when completed, but is now shut in for lack of outlet of any kind. This second try for oil production in the area will be made in the southeast quarter of the same section and survey, and material is being moved in for same. It will be closely watched for results, many believing that this county, and especially this area has good chances for producing high gravity oil.

Gaines County

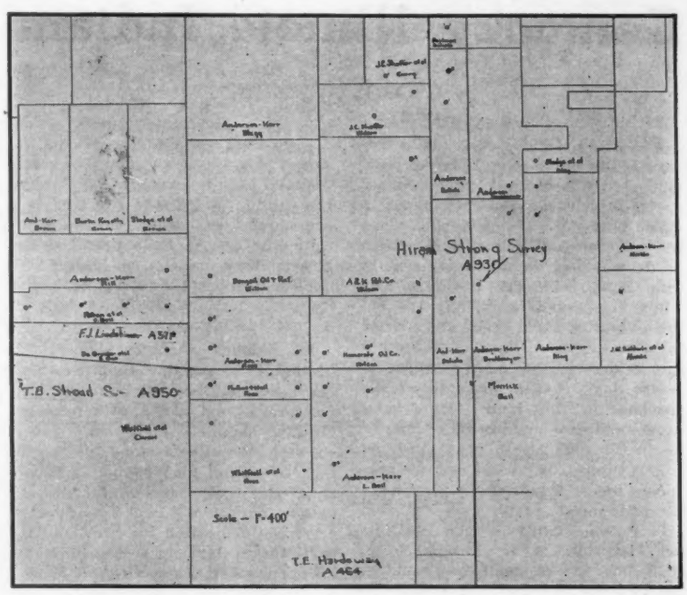
About one mile northwest of Landreth Production Co.'s recent small discovery in section 22, Block A-21, Gaines County, Stanolind Oil & Gas Co. has staked another interesting location in the southeast quarter of section 18, Block A-21, on the D. Davis ranch. Derrick has already been erected. The Landreth discovery drilled into water at 4,870 feet and has been plugged back to 4,855 feet in an effort to get a shutoff preparatory to acidize or shoot, and will be placed on the pump. No potential gauge has ever been taken on the well, which opens up the first producing area of the county. Six miles northwest of the Landreth discovery the Humble Oil & Refining Co. continues to drill on its No. 1 W. Eubanks, in section 6, Block AX, in the same county, and is down below 5,400 feet, without showing any signs of encouragement. It looks as if it is slated for abandonment soon. Acidation at 5,343 feet showed but small results.

Wildcat Failure

C. V. (Dad) Joiner's wildcat in the northeast corner of Winkler County, in section 46, Block 73, is to be abandoned after striking sulfur water at 5,055 feet. However, another wildcat location has been staked in this same area, by Gregg Oil Co. on lands of Bedford and Ratliff about 3 miles west of two wildcat tests in northwestern Ector County and about 6 miles from a small producer in the latter area, and north of the Joiner dry hole in Winkler County.

Emperor Extension in Winkler

Phillips No. 1 F. P. McCabe, southeast corner of section 1, Block B-12, about one-half mile north of production in the Emperor pool, south of Kermit, in Winkler County, is extending that pool nearer to the Brown and Altman production and strengthening the chance of linking the two producing areas in the sandy lime trend running parallel, north and south, east of the Hendrick field. It flowed 57 bbls. in 16 hours and is to be given a shot to increase its potential. It logged its first oil at 2,707-28 feet and is bottomed at 2,949 feet.



Anderson & Kerr pool, 2 miles east of Gainesville in Cooke County, one of the most active spots in North Texas. Arrow marks the discovery. The field now covers nearly 700 acres and is being extended each week by high gravity producers in the Strawn series. Map drawn by H. D. Jenkins, geologist for Anderson-Kerr Drilling Co.

Upton County Wildcat

Fred T. Hogan and others are preparing to drill a wildcat in southern Upton County, about 4 miles southeast of the recently opened production in the Hurdle area, southeast of McCamey. Location is expected to be in section 3, Block W, G.C.&S.F. Survey, about 2 miles from the nearest production.

Jones County Test

The Archer Drilling Co. is drilling below 200 feet in No. 1 Berryhill, semiwildcat, in Lot 7, L. Moore Survey, No. 1, a half mile northeast of the recent discovery of Martin & Sons on the Spurrier farm in eastern Jones County, about 4 miles north of Nugent. A recent attempt a couple of miles to the north to extend the pool proved a failure, and it will be interesting to note if production is to go to the northeast. N. H. Martin & Sons are expected to stake location to the northwest of their discovery this week.

Thomas D. Humphrey and others have staked location for a wildcat about one-half mile north of Hawley, Jones County, on the W. F. Rushing lands, in the G. Martinez Survey No. 195. Material is in. Another wildcat in the county is to be drilled by R. B. Farris and Leland Fikes, discoverer of the Lueders pool last year. This test is to be on the John Guitar lands in section 44, Block 15, T.&P. Survey, north and east of Hawley.

Wichita Falls District

One of the most active districts in the North Texas (Wichita Falls) district is the Anderson & Kerr pool 2 miles east of Gainesville in Cooke County. At the present time there are 20 wells producing with six standing shut down on top of the sand, sure to make producers, with a number drilling and new locations being made each week. One of the important locations is to be drilled by the Target Drilling Co. (Joe Baldwin) 1 mile northwest of the field which has been defined on the east and southeast only.

Average total depth of the wells in this new Strawn-sand-series pool is 2,000 feet, with 14 feet being the most sand yet found in any well producing. The average porosity of the sand is 24.7. The best well in the pool, the discovery well of Anderson & Kerr on the Bruhlmeyer farm in the Strong Survey, flowed 13.2 bbls. per hour, although it pumped over twice that amount when jack was rigged up over it. All wells in the field are pumping the high-gravity crude, which tests 42.8 degrees, but which is having serious difficulty in finding an outlet, there being only one loading rack, a 10-car rack on the M.K.&T. Railroad, owned by Anderson & Kerr, from which oil is being shipped to the Panhandle Refining Co. plant at Wichita Falls and to a small refinery in Fort Worth. About 1,000 bbls. per day is being loaded out to the former plant.

Five more loading racks are to be erected on the M.K.&T. Railroad near Gainesville and this together with three small refineries now being erected east and southeast of Gainesville will give the pool a much needed outlet. The Tidal Refining Co., Gainesville Refining Corp. and R. L. Knight of the North Texas Refining Co. of Joinerville are erecting the plants, the largest of which will be 2,000 bbls.

There are 700 acres proven in the field, the majority of the wells having been drilled by rotaries and completed by spudders or portable rigs. From five to six days are necessary to drill the tests, athough one well was drilled in 55 hours.

Anderson & Kerr Drilling Co. of Oklahoma City hold the greater part of the proven acreage in the field and have moved into Gainesville. H. D. Jenkins, geologist; James Anderson, president; John S. Lawry, production superintendent; Charles Walton, tool pusher, and Miss Nell Stone have their offices there.

Machine shops and supply houses are opening in the field or in Gainesville.

G. A. Mattson, Oklahoma City, general manager, and Bob Mahoney, superintendent, are supervising construction of the 2,000-bbl. plant of the Gainesville Refining Co. on the E. T. Spires farm east of Gainesville. W. H. Marshall will be local manager of the plant.

North Texas

The smallest number of completions reported for the North Texas district in many months was recorded this week, principally because the district is greatly in need of water with which to carry on drilling operations. Only 14 tests were completed, six of which proved dry.

Archer County added another pool

when R. O. Harvey, Jr., and others drilled in No. 1 A. B. Edwards, in the John Kelly Survey, Abstract 243, about 2½ miles southwest of Scotland and 3 miles west of the Chalk Hill deep production. It is estimated good for from 25 to 30 bbls. from sand logged at 1,298-1,302 feet. It is being placed on the pump.

Sale in Archer County

W. R. Hammond of Wichita Falls purchased some 3,200 acres adjoining the Chalk Hill production to the west and southwest in Archer County this week from Crawford & Plowman of Dallas. It is in the H. Corzine Survey. Cash consideration was reported as $32,000.

Showing

The wildcat test in Denton County of Moore & Manning on lands of the Scottish American Mortgage Co. in the P. Walters Survey, about 4 miles south of Pilot Point, attracted attention this week when it showed some oil and gas in brown lime from 2,509-12 feet, which is expected to be cored further in an effort to pick up heavier porosity. The operators hold some 7,000 acres under lease in this area.

Montague County Deep Test

The deep wildcat test drilled by the Sinclair Prairie Oil Co. and others on the D. P. Holt lands in the Kaufman County School Land Survey, about 6 miles northeast of Nocona, drilled into granite to 3,648 feet and prepared to plug back to test the shallow oil and gas showings passed up when it sought a 6,500-foot level in Montague County, in quest of Ordovician production. The Canyon lime was picked up at 1,208 feet. The test is on a block of some 4,000 acres acquired from Gibson & Jennings of Wichita Falls, who are now drilling a shallow test nearby. The first showing to be tested by the Sinclair Prairie test will probably be around 1,725-55 feet.

WEST TEXAS COMPLETIONS

Garza County

M. L. Richards No. 1 Post estate, dry and abandoned 3,209 feet, elevation 2,752 feet.

Howard County

Sinclair Prairie Oil Co. No. 2 Texas Land & Mortgage Co., 2,490-2,810 feet, shot, 360 bbls.; No. 41 Dodge, 2,810 feet, shot, 151 bbls.; No. 42 Dodge, 2,628-2,820 feet, shot, 227 bbls. National Petroleum Corp. No. 4 Denman, 2,786 feet, shot, 390 bbls. Iron Mountain Oil Co. No. 10 Read, dry and abandoned 2,664 feet, elevation 2,292 feet.

Jones County

Ungren and Frazier No. 7-C Dorsey, 2,217 feet, 789 bbls. in 13 hours. Owens-Snebold Oil Corp. No. 1 S. Gorman, dry and abandoned 2,301 feet, elevation 1,667 feet.

Pecos County

Iowa Realty Trust No. 1 D. G. Gray, 1,627-40 feet, shot, 50 bbls. Courvette Oil Co. No. 10 Tippett, 600-02 feet, 96 bbls. oil per day and 100 bbls. water per hour. Cardinal Oil Co. No. 11-A Smith, 343-55 feet, 27 bbls. pumping.

Ward County

Hall and others No. 1 Emery, dry and abandoned 3,318 feet, elevation 2,453 feet. Tide Water Oil Co. No. 4 Mason, 2,403-95 feet, shot, 281 bbls. Shell Petroleum Corp. No. 6 Sloan, 2,455-3,045 feet, acidized and shot. F. H. E. Oil Co. No. 2-B Richter, 2,441-2,569 feet, shot, 1,511 bbls. F. H. E. Oil Co. and others No. 3 Killough, 2,295-2,376 feet, 588 bbls. F. H. E. Oil Co. No. 3-C Richter, 2,467-2,575 feet, shot, 1,807 bbls. Bond and Harrison No. 5-A Maxwell, 2,240-2,502 feet, shot, 2,084 bbls. L. D. Thorne No. 3 Beatty trustee, 2,459-80 feet, 407 bbls. Humble Oil & Refining Co. No. 7 Richter, 2,424-2,595 feet, 11,000,000 feet gas. California Co. No. 27 Gordon, 2,258-2,520 feet, shot, 888 bbls.; No. 23 York, 2,300-2,520 feet, 472 bbls. Sid Richardson No. 2-A University, 2,550-2,755 feet, shot, 707 bbls., 1½ per cent b.s.&w. Uscan Oil Co. and others No. 1 Brown, dry and abandoned 2,633 feet.

Winkler County

Tide Water Oil Co. No. 8 Walton, 2,800-2,931 feet, shot, 1,653 bbls.; No. 9 Walton, 2,780-2,930 feet, shot, 1,099 bbls. Humble Oil & Refining Co. No. 3 McCutcheon, 2,755 feet, 8,250,000 feet of gas. Gulf Oil Corp. No. 5 Daugherty, 2,810-3,000 feet, shot, 1,041 bbls.; No. 6 Daugherty, 2,815-3,000 feet, shot, 619 bbls. in two hours. Magnolia Petroleum Co. No. 27 Walton, 2,817-2,925 feet, shot, 568 bbls.; No. 2 State-Walton, 2,646-3,352 feet, plugged back to 3,314 feet, shot, 172 bbls. Sinclair Prairie Oil Co. No. 6-B Cummins, 2,797-3,037 feet, shot, 348 bbls. Humble Oil & Refining Co. No. 3-C Walton, 3,090-3,127 feet, acidized, 379 bbls. in four and three-quarters hours. Sios Oil Co. No. 2 Lovett, total depth 3,130 feet, 10 bbls. Richardson Oils, Inc. No. 1 Scarborough, 2,844-3,020 feet, 697 bbls.

Upton County

Texas Pacific Coal & Oil Co. No. 23-A Lane, 2,119-45 feet, acidized, 963 bbls. on pump.

Yoakum County

Bahan and others No. 1 Alice Henard, dry and abandoned 5,328 feet, elevation 3,691 feet.

NORTH TEXAS COMPLETIONS

Archer County

Burns & Long No. 19 J. H. Turbeville Tidal, 1,504-19 feet, 35 bbls. Hattie B. Madden No. 1 L. F. Wilson, 1,555 feet, dry.

Cooke County

Anderson & Kerr No. 2 L. K. Bell, 1,941-51 feet, 528 bbls. Homarado Oil Co. No. 2 Ed Wilson estate, 1,929-35 feet, 350 bbls.

Jack County

S. B. Edwards No. 1 Bryson, 3,257 feet, dry.

Wichita County

Coleman & Coppock No. 3 E. Kempner, 838-47 feet, 5 bbls. Continental Oil Co. No. 9 J. J. Waggoner C, 1,931 feet, dry; No. 2 Waggoner E, 1,300-21 feet, 83 bbls. G. W. Cooper No. 41 Waggoner, 1,302-20 feet, 20 bbls. Fain-McGaha No. 2 Munger, 1,800 feet, dry.

Wilbarger County

Franklin Oil Co. No. 1 D. G. Feller, 1,680 feet, dry. Lido Oil Co. No. 13 Waggoner C, 2,050-93 feet, 30 bbls.

Young County

Archer Drilling Co. No. 3 Edwards, 1,218-21 feet, 45 bbls. Associated Dev. Co. No. 1 E. G. Williamson, 3,000 feet, dry.

PANHANDLE COMPLETIONS

Carson County

Stanolind Oil & Gas Co. No. 3 McConnell, 3,227-3,295 feet, 487 bbls. on pump.

Gray County

Champlin Oil & Refining Co. No. 11 McLaughlin, 2,930-3,006 feet, 679 bbls. on pump. H. Forster No. 1 Johnson, dry and abandoned 2,860 feet. Kewanee Oil & Gas Co. No. 9 Arnold, 3,177-3,250 feet, 536 bbls. on pump. Nabob Oil Co. No. 2-D Morse, dry and abandoned 3,105 feet. Southern Petroleum Exploration Co. No. 1 Hughey, total depth 3,112 feet, shot, 5 bbls. on pump. Upland Oil Co. No. 1 Saunders, 2,935 feet, plugged back to 2,840 feet, shot, 20 bbls. on pump.

Hutchinson County

Gulf Oil Corp. No. 60 Dial, 3,010-3,100 feet, shot, 288 bbls. on pump. Phillips Petroleum Co. No. 7 Johnson, 3,028-40 feet, 541 bbls. on pump. Stanolind Oil & Gas Co. No. 2-A Terry, 2,903-70 feet, shot, 530 bbls. on pump.

Wheeler County

Corite Oil Co. No. 2 Gregg, 2,127 feet, plugged back to 2,122 feet, shot, 35 bbls. on pump. Cub Oil Co. No. 1 Holmes, junked and abandoned 1,880 feet. Smith Brothers No. 6 Johnson, 2,475-2,538 feet, 1,503 bbls.

Central West

Operations in Central Ohio, Kentucky, Illinois, Indiana

By GEORGE A. WHITNEY

FINDLAY, Ohio, Aug. 17.—The once highly productive Lima oil field, which only last week gave promise of regaining some of its former prominence, suffered a severe setback when the sole remaining market for Lima crude was lost by the producers in this field. National Refining Co., which has taken practically the entire output of Lima crude since other refiners stopped using it a few years ago, announced that at the expiration of 90 days it will discontinue the purchase of this crude. More than 7,000 "stripper" wells, with a daily production of 2,200 bbls., must be either capped or abandoned as producers unless a new unforeseen market is found.

In Fulton County, section 16, Clinton Township, M. L. Stevens No. 1 H. Voder was a small gas well. It gauged 9,000 feet and had a show of oil at a total depth of 2,935 feet. Montgomery & Co. No. 2 H. W. Hetrick, in Rice Township, Sandusky County, which had a small show of gas, has been abandoned. McPharon & Co. is building a rig on its H. J. Seifert lease in section 10, Pitt Township, Wyandot County. In Hardin County, section 18, Pleasant Township, Petescine Corp. has a rig on the Oscar Grappy property.

CENTRAL OHIO

Six gas wells and two oil producers were completed in the Central Ohio field this past week and an increase in activity is apparent as numerous locations for gas are being made.

In Coshocton County, section 20, Bethlehem Township, Ohio Fuel Gas Co. No. 1 Ira Croul had an initial of 17 bbls. after a shot. In section 17, Perry Township, Kundtz-Hulse, Inc., No. 3 Charles Dawson, total depth 3,130 feet, gauged 300,000 feet of gas. In the same township, Murphy & Co. No. 4 John S. Rine produced 15 bbls. the first 24 hours after being shot. In section 16, Perry Township, Ohio Fuel Gas Co. No. 3 Grace McCament is down 2,000 feet.

Ohio Fuel Gas Co. No. 1 Louis Lasoncy, Lot 50, Sullivan Township, Ashland County, was drilled through the Clinton at 2,630-34 feet and is a commercial gas well. In the same township, Lot 51, Ohio Fuel Gas Co. has made a location on the E. C. Johnson property and has staked a location on the Wade Welch farm in section 18, Jackson Township.

In Holmes County, section 12, Mechanic Township, Bell Brothers No. 1 Susanna Metzler gauged 67,000 feet of gas and had a rock pressure of 250 pounds. Pay was struck through the Berea sand at 820-30 feet. In section 16, Washington Township, Ohio Fuel Gas Co. staked a location on the William Young property, and a location for No. 2 on Albert Burkey farm in section 6, Richland Township. In section 17, Washington Township, East Ohio Gas Co. No. 1 Barnhart & Lifer is drilling.

In Lorain County, section 28, Avon Township, William Dempsey has moved a rig on his William & M. Barr location. In Lot 81, Columbia Township, Ohio Fuel Gas Co. has staked a location on its A. D. Carpenter lease. In section 6, Penfield Township, it is "in" 2,100 feet on No. 1 Elmer Bunt.

In Stark County, section 4, Jackson Township, Ohio Fuel Gas Co. has staked two locations, one on the Irene Lingle property and one on the C. J. Buchtel farm. In section 3, same township, Ohio Fuel Gas Co. is down 2,730 feet on the A. J. Stoner lease. Section 12, Perry Township, Blake & Fawcett are building a rig for No. 1 on the Indianola estates property. In section 15, Plain Township, Lyons & Co. No. 1 Hiram Shaub is down 4,200 feet.

In Perry County, section 24, Reading Township, Mid-East Gas Co. No. 2 Edward Noll was drilled through the Clinton sand at 3,066-3,108 feet, with a very small show of oil, not increased when shot, and it has been abandoned. In section 1, same town-

(Continued on Page 139)

Kansas Developments

By
DAL DALRYMPLE

KANSAS PRODUCTION SOARS; OIL STRIKE FOR OTIS DISTRICT

Several important developments featured Kansas oil activity during the past week, one of the more significant being the increased production. The daily average flow of crude petroleum from Kansas wells soared to 170,325 bbls. daily, an all-time high for the Sunflower state. This was an increase of 30,675 bbls. daily over the preceding week. The Silica pool of Rice and Barton Counties took the lead for the state with 14,850 bbls. daily, as against the 14,300 bbls. daily production of the Burrton field of Reno County, which has been the leading producing area in recent months. Silica production the preceding week was 7,730 bbls., as against 14,200 bbls. for Burrton.

The opening of a Siliceous lime gas pool in Rice County was another highlight of the week in Kansas. This was at the Simpson & Noble and others No. 1 Pulliam, wildcat in section 35-19-8w, said to be first Kansas well producing gas only from that horizon. Previously, combination oil and gas wells producing from Siliceous lime have been completed.

The Otis gas field of eastern Rush County provided another feature of the week, with its largest oil-producing well. This was the Morgan & Flynn and others No. 1 Koril, NW NW SW section 23-18-16w. It produced 1,470 bbls. of oil in 12 hours, with back pressure of 125 pounds. The flow ranged from 105 to 131 bbls. an hour. La Motte sand was topped at 3,511 feet and oil pay was found at 3,536-39 feet, total depth. Preparations were being made for a potential test. The Otis gas area was opened by Morgan & Flynn more than six years ago, but it was not until a few months ago, when Schermerhorn Oil Co. completed an 800-bbl. oil producer at its No. 1 Maneth Brackley, in section 22-18-16w, that operators considered developing the district for oil. The new oil well has spurred activity, rigs already being on the ground for three offsets.

The Hauschild gusher area of southern Rice County was extended one-fourth mile east at Derby Oil Co. No. 1 Hauschild, in section 11-21-7w, which topped Chat at 3,361 feet and began filling with oil at 3,380 feet. Shell Petroleum Corp. completed another big producer in the Lerado pool of southwestern Reno County at No. 2 Whipple, section 14-26-9w, an area that now has seven completed wells with a total potential of 58,741 bbls. daily. The Goodrich pool of Sedgwick County was extended to the east when oil pay was found in Western Kansas Oil & Refining Co. No. 1 Keagy, section 15-25-1e, at 3,390-91 feet in Viola lime.

Reno County

Completions in Reno County included one producer in the Lerado pool, five in the Burrton field and one in the Hilger area. Largest of the producers was Shell Petroleum Corp. No. 2 L. F. Whipple, C E half E half NW section 14-26-9w, in the Lerado pool. It topped Viola at 4,118 feet, was bottomed at 4,134 feet, and after acidizing it flowed 1,224 bbls. in three and one-half hours. It made potential of 6,785 bbls.

In the Burrton district, Manning & Martin, Inc. No. 3 Goering, NW NE NE section 1-23-4w, flowed 986 bbls. of oil in 24 hours after acidizing. It topped Chat at 3,253 feet; total depth, 3,344 feet. It flowed 135 bbls. of oil in four and one-half hours before acidizing. Sinclair Prairie Oil Co. No. 3 Seedle, NE cor. section 17-24-4w, topped Chat at 3,287 feet and was bottomed at 3,375 feet. It flowed 40 bbls. of oil in three hours before acidizing. It was acidized with 2,000 gallons and flowed 959 bbls. of oil and 34 bbls. of water in 24 hours. It was acidized again with 5,000 gallons and flowed 934 bbls. in 24 hours. Ohio Oil Co. No. 2 Hill, SE NE SE section 18-24-4w, made potential of 833 bbls. of oil after acidizing with 2,200 gallons. It flowed 300 bbls. of oil in 24 hours before acidizing. Top of Chat was 3,326 feet; total depth, 3,390 feet. Empire Oil & Refining Co. No. 1 Scheuchzer, NE NE NW section 20-24-4w, swabbed and flowed 240 bbls. of oil in 24 hours from Chat, topped at 3,311 feet; total depth, 3,379 feet. After treatment with acid, it flowed 632 bbls. of oil and 55 bbls. of water in 24 hours. Same operator's No. 2 Scheuchzer, SE NE NW section 20-24-4w, flowed and swabbed 250 bbls. of oil before acidizing, and 560 bbls. of oil and 50 bbls. of water in 24 hours after acidizing. Top of Chat was 3,320 feet; total depth, 3,379 feet.

Magnolia Petroleum Co. No. 3 Rodgers, NE SW SW section 9-26-4w, in the Hilger pool, had Viola lime at 4,042-50 feet, total depth, and made potential of 817 bbls. of oil. Top of Chat was 3,614 feet; Misener, 4,004 feet.

New work in Reno County: Clyde Pulse and others No. 1 Payne, SW NW NE section 4-22-7w, wildcat near the Reno-Rice County line, moving in material; Shell Petroleum Corp. No. 3 Welch "A," C NE SW section 9-24-4w, rig; L. R. Page and others No. 1 Mueller, C S half SW NE section 25-24-5w, moving in material; Magnolia Petroleum Co. No. 3 Mayme Harris, NW NE NW section 9-26-4w, building rig.

Ellis County

Margay Oil Co. No. 4 Bemis "A," SE SW SE section 16-11-17w, was the only producer completed in Ellis County. It topped Simpson zone at 3,326 feet; Siliceous lime, 3,332 feet, total depth, and made potential of 1,369 bbls. of oil. Empire Oil & Refining Co. No. 1 Herl, SE cor. section 22-15-19w, wildcat west of the Ruder area, had a hole full of water at 3,588-92 feet and was dry and abandoned at 3,598 feet, total depth. Top of anhydrite was 1,135 feet; Topeka, 2,935 feet; Oswald, 3,242 feet; Conglomerate, 3,490 feet; La Motte sand, 3,586 feet. Lion Oil & Refining Co. No. 1 Roth, NW cor. section 21-15-18w, in the Ruder district, topped anhydrite at 1,169 feet; Dodge, 3,270 feet; Oswald, 3,298 feet; Conglomerate, 3,548 feet; Siliceous, 3,595 feet; and a hole full of water at 3,608-10 feet, total depth, and was abandoned. It was the Lion company's first venture in Kansas.

Two new Ellis County tests were reported. Margay Oil Co. No. 3 Bemis "A," SW SE SE section 16-11-17w, was building rig. Stanolind Oil & Gas Co. No. 34 L. L. Austin, SW SE NE section 36-12-16w, was a location.

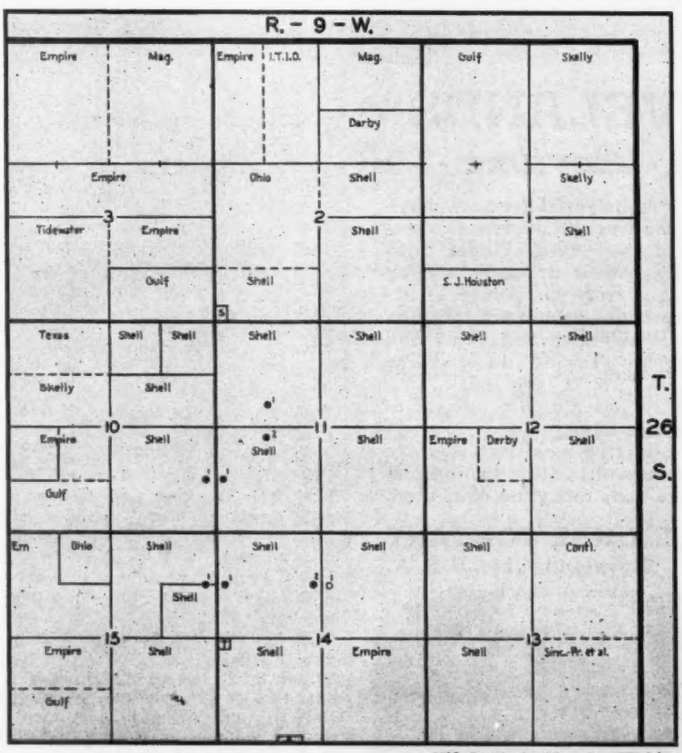
Kansas Development Corp. No. 1 Haller, SE SE NW section 10-11-18w, wildcat northeast of the Hadley-Bemis areas in northern Ellis County, was estimated to be good for 1,000 or more barrels of oil daily. It pumped 462 bbls. of oil in 13 hours after acidizing, producing 65 bbls. an hour the last three hours of the test. The column was not lowered appreciably, it was reported. It topped Topeka lime at 2,915 feet; had first oil at 3,046 feet, and was bottomed at 3,050 feet.

Uscan Oil Co. No. 2 Bemis, NW NW NE section 21-11-17w, topped Siliceous lime at 3,347 feet; had pay at 3,369-75 feet, total depth, and made potential of 545 bbls. of oil, but had not been completed. Gulf Oil Corp. No. 2 Swires, NE SE SW section 8-15-18w, topped Siliceous lime at 3,554 feet, drilled to 3,560 feet, total depth, and 2,900 feet of oil rose in the hole in 10½ hours. Texas Co. No. 1 A. Ruder, SE SE NE section 8-15-18w, pumped 288 bbls. of oil in 12 hours from Siliceous lime, topped at 3,562 feet; total depth, 3,588 feet.

Russell County

W. I. Southern, Inc. had the biggest completion of the week in Russell County at No. 4 Shaffer, NE NW NE section 31-15-13w. After treatment with 4,000 gallons, it made potential of 2,546 bbls. of oil. Top of anhydrite was 815 feet; Oswald, 3,008 feet; Siliceous, 3,252-53½ feet, total depth.

Stanolind Oil & Gas Co. No. 36 C. A. Mermis, SE SE NE section 5-14-15w, topped anhydrite at 923 feet; Oswald, the producing formation, at 3,041 feet; pay at 3,065-75 feet; total depth, 3,078 feet. It was acidized with



—Mid-Continent Map Co., Wichita.

Map of Lerado pool, gusher area in Reno County, Kansas, where Shell Petroleum Corp. has completed seven producers with total potential of 58,741 bbls. daily

2,000 gallons, swabbed 125 bbls. of oil in three hours after a head and made potential of 548 bbls. of oil. Lee & Reser No. 1 Penix, SW SW SE section 13-14-13w, wildcat, was dry and abandoned at 3,435 feet, total depth. It topped anhydrite at 705 feet; Topeka, 2,595 feet; Oswald, 2,939 feet; Siliceous, 3,320 feet.

The following new work was reported in Russell County: Hartman & Blair and others No. 1 Boxberger, NW NW SW section 32-13-14w, an old well being deepened, waiting on cement; Braden & McClure No. 1 Herbel, NE NE NW section 35-14-14, wildcat, spudded; Empire Oil & Refining Co. No. 8 Crawford, NW NE SW section 2-14-15w, moving in material.

Empire Oil & Refining Co. No. 6 Crawford, SW SE SW section 2-14-15w, had Gorham sand at 3,301-07 feet, total depth. Oil rose 2,800 feet in the hole in 27 hours, but it had not been tested. Darby Petroleum Corp. No. 1 Dumler "B," NW SW NW section 11-14-15w, was bottomed at 3,278 feet, in Gorham sand topped at 3,274 feet, and had 1,800 feet of oil in the hole. Coralena Oil Co. No. 4 Trapp, SE NE SE section 30-15-13w, had a hole full of oil from Siliceous lime at 3,250-53 feet, total depth.

Rice County

Two oil producers and one gas well were completed in Rice County. J. H. Tatlock and others No. 7 Berscheit, SE NW NW section 6-20-10w, in the Silica pool, made potential of 1,886 bbls. of oil after acidizing with 2,000 gallons. Production was from Siliceous lime at 3,261-72 feet, total depth. Hartman & Blair and others No. 2 Schartz, SE NE SE section 33-19-10w, topped Kansas City formation at 3,025 feet; Siliceous at 3,310½ feet, and was bottomed at 3,320 feet. It was acidized with 3,000 gallons and made potential of 440 bbls. of oil. Simpson & Noble and others No. 1 Pulliam, C S half N half NE section 35-19-8w, wildcat east of Lyons, produced 70,000,000 feet of gas after plugging back from 4,085 feet, total depth, to 3,385 feet. Top of Kansas City was 2,846 feet; Viola, 3,189 feet; Simpson, 3,210 feet; Siliceous, 3,279 feet.

New work in Rice County: Empire Oil & Refining Co. No. 1 Janssen "C," NE SW NW section 3-18-8w, location; Buckley No. 1 Bailey, SW SW NW section 19-20-6w, wildcat southeast of Lyons, rigging up machine; Darby Petroleum Corp. No. 4 Johnson, SW cor. section 10-21-7w, building rotary rig.

Empire Oil & Refining Co. No. 4 Janssen "A," SW NE NW section 3-18-8w, topped Siliceous lime at 3,243 feet; total depth, 3,267 feet; oil rose 800 feet in the hole and it was acidized but had not been tested. Texas Co. No. 1 Kleile, NW SW SW section 34-19-10w, pumped 328 bbls. of oil in 24 hours, down three hours. It topped Siliceous lime at 3,322 feet; total depth, 3,327 feet. Shell Petroleum Corp. and others No. 1 Tobias, C S half S half NE section 6-19-9w, swabbed 346 bbls. of oil in 14 hours at total depth of 3,238 feet.

Estimated Daily Production

Estimated daily average production in Kansas for the week ending August 15, and for the preceding week, is as follows:

	Barrels	
	Aug. 15	Aug. 8
Oxford City	3,550	2,900
Burrton	14,300	14,200
Ritz-Canton	6,200	6,300
Hollow-Nikkel	4,025	3,825
Voshell	3,125	2,875
Ellsworth County:		
Lorraine-S. Lorraine	7,326	3,426
Other pools	1,960	1,034
Rice-Barton Counties:		
Chase	10,297	6,870
Raymond	3,407	2,185
Silica	14,856	7,730
Keesling	2,829	1,505
Miscellaneous Rice	8,496	5,618
Miscellaneous Barton	4,367	2,607
Russell County:		
Fairport	2,494	2,380
Gorham	3,696	3,895
Russell	3,458	2,225
Sullivan	3,474	2,265
Other pools	8,263	6,031
Sedgwick County:		
Valley Center	1,341	1,300
Greenwich	1,302	1,328
Robbins	1,172	1,530
Eastborough	813	795
Other pools	378	372
Ellis County	2,423	2,037
Kingman County	670	622
Stafford County	2,250	867
Greenwood County	10,800	10,750
Butler County	18,200	17,925
Other fields	24,853	24,253
Total Kansas	170,325	139,650

Barton County

Completions in Barton County included three new producers and one failure. National Refining Co. No. 2 McLean, NW SW SE section 25-17-11w, in the north end of the Bloomer pool, made potential of 1,396 bbls. of oil naturally from Siliceous lime at 3,270-85 feet, total depth, completed. Top of anhydrite was 600 feet. Spencer Drilling Co. No. 1 McLean, SW NW SE section 25-17-11w, had Siliceous lime at 3,278-91 feet, total depth, and produced 470 bbls. of oil in 24 hours. After acidizing, it made potential of 1,789 bbls.

Republic Oil Co. No. 1 Bloomer, NE SE NW section 36-17-11w, has extended the Bloomer pool one-fourth mile south. It topped Siliceous at 3,274 feet; total depth, 3,283 feet; and pumped 776 bbls. of oil in 24 hours, down four hours. It then was acidized with 2,000 gallons but had not been tested.

Darby Petroleum Corp. No. 3 Kultgen, C N half N half NW section 16-16-12w, in the Beaver district, topped anhydrite at 817 feet; Topeka, 2,702 feet; Oswald, 3,072 feet; sand, 3,343-52 feet, total depth; and made potential of 929 bbls. of oil, completed. Texas Co. No. 3 Schmidt, SE SE NW section 36-19-11w, in the Silica area, topped Siliceous lime at 3,287 feet; was bottomed at 3,331 feet; plugged back to 3,320 feet, failed to make a producer and was abandoned.

Two new Barton County tests were reported. Republic Gas Co. No. 2 Bloomer, NW SE NW section 36-17-11w, was a cellar. Empire Oil & Refining Co. No. 1 Rader, NW cor. section 12-19-11w, was moving in material.

McPherson County

Continental Oil Co. and others No. 4 Hetzke, NE cor. section 29-21-1w, in the Graber area, McPherson County, made potential of 1,360 bbls. of oil after acidizing with 4,000 gallons and was completed at 3,319 feet, total depth. Production was from Hunton lime, topped at 3,303 feet. Dickey Oil Co. No. 1 Goering, SE cor. section 17-21-1w, topped Chat at 2,900 feet; lime, 3,150 feet; Hunton, 3,300 feet; pay, 3,312-17 feet; total depth, 3,320 feet. It pumped 284 bbls. of oil in 24 hours; then was shot and acidized and made potential of 795 bbls. of oil, completed.

Rush County

Boyle & Grossman No. 1 Wilson, NE cor. section 33-17-19w, wildcat in northwest Rush County, was dry and abandoned at 4,009 feet, total depth. Siliceous lime was topped at 3,989 feet.

Three new tests were reported in Rush County. Morgan & Flynn and others No. 1 Schaffer, NE NE SE section 22-18-16w, was a cellar. Schermerhorn Oil Co. and others No. 2 Maneth-Brackley, SE SE NE section 22-18-16w, was a cellar. Morgan & Flynn and others No. 2 Koril "A," SW SW NW section 23-18-16w, was a location.

Ellsworth County

Carter Oil Co. and others No. 1 Kruse, C S half S half NE section 31-17-8w, wildcat east of the South Lorraine pool in southern Ellsworth County, was dry and abandoned at 3,392 feet, total depth. It topped anhydrite at 430 feet; Topeka, 2,465 feet; Kansas City, 2,865 feet; Conglomerate, 3,225 feet; Viola, 3,280 feet; Simpson, 3,328 feet; Siliceous, 3,384 feet. Smith & Ash and Gulf Oil Corp. No. 3 Shanyo, NE SW SW section 24-17-10w, in the Wilkens area, topped Siliceous lime at 3,225 feet; had a hole full of water at 3,269-72 feet, total depth, and was dry and abandoned.

Sedgwick County

R. J. Wallace and others No. 1 Scheer, SW cor. section 22-27-3w, new wildcat test in western Sedgwick County, was a rotary rig.

Stafford County

Skelly Oil Co. and others No. 1 Kipp, SE SE NE section 27-25-14w, is a location for a new wildcat test southwest of St. John in southwestern Stafford County.

Pratt County

Indian Territory Illuminating Oil Co. and Olson Drilling Co. No. 1 Bolt, C NW NE section 5-29-11w, is a new wildcat test in southeastern Pratt County. Rotary rig was being built.

Butler County

Vickers Petroleum Co. No. 3 McCraner "D," C N half NE section 2-25-3, Butler County, was completed as a Mississippi lime producer at 2,731 feet, total depth. After acidizing with 1,000 gallons, it made potential of 101 bbls. of oil. El Dorado Re-

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fining Co. and Skelly Oil Co. No. 2 Gilson, NW SE NE section 10-38-6, topped Siliceous lime at 3,028 feet; total depth, 3,038 feet. It was plugged back to 3,036 feet, made potential of 84 bbls. of oil on two-day average and was completed.

New work in Butler County: Page Houston No. 2-A Eyestone, SE NW SW section 8-23-4, rigging up machine; Flint Hills Oil & Gas Co. No. 2 Rollins, C NW SW section 23-28-4, rigging up machine.

Rooks County

El Dorado Refining Co. No. 1 Southard, SW SW SE section 1-6-18w, was building rig. It is an offset to the discovery well in the most northerly pool in Kansas, in northern Rooks County.

Greenwood County

Absher and others No. 1-A Gruber, SE SW SW section 33-22-13, Greenwood County, was dry and abandoned at 1,175 feet, total depth. It had sand at 1,652-1,708 feet. Barker & Herman No. 1 Lockhard, NW SW SW section 15-26-13, topped Peru sand at 1,103 feet; sand at 1,414 feet; hole full of water at 1,418 feet and was dry and abandoned at 1,425 feet, total depth.

The following new work was reported in Greenwood County; Landon & Parrish No. 2 Johnson, NE SE SE section 16-24-12, location; Shull Drilling Co. and Shell Petroleum Corp. No. 6 Johnson, NW SE NW NW section 16-24-12, spudded; Marshall and others No. 1 Larue, C N half NE NE section 21-26-13, spudded.

Woodson County

The only completion in Woodson County was Elbar Corp. No. 2 Opperman. SE NE NE section 27-23-14, which topped lime at 1,621 feet and was bottomed at 1,653 feet. It was acidized with 3,000 gallons and pumped 20 bbls. of oil in 24 hours.

One new Woodson County test was reported. C. L. Sheedy and others No. 3 Tipton, NW NE NW section 28-25-14, had spudded.

Sumner County

Stelbar Oil Corp. No. 6 Erker, NW NW SW section 33-31-1w, in the Wellington area, Sumner County, made potential of 843 bbls. of oil after acid treatment with 2,000 gallons. Top of Chat was 3,639 feet; total depth, 3,675 feet. Same operator's No. 4 Barlow, NE NW SE section 33-31-1w, topped Chat at 3,662 feet; total depth, 3,708 feet. It was acidized with 2,000 gallons and made potential of 513 bbls. of oil. E. B. Shawver No. 1 Judd, SW SE NE section 3-34-2e, wildcat in southeastern Sumner County, was dry and abandoned with a hole full of water at 3,770-75 feet, total depth. Top of Siliceous lime was 3,753 feet.

Rose Spring Drilling Co. and others No. 1-A Rutter, C NW NW section 21-33-2, new wildcat in Sumner County, was a rotary rig.

Cowley County

Trees Oil Co. No. 3 Littell, C W half NE section 19-30-4, in the Trees pool, Cowley County, was moving in material.

Harvey County

Palmer and others No. 1 McBurney, C NW NW section 12-23-2w, new test in the Halstead district, Harvey County, was a rotary rig.

Grant County

Columbian Fuel Co. No. 1 Gray, C SE section 3-29-35w, new wildcat in Grant County, was drilling below 575 feet. Same operator's No. 1 Webster, C NE section 34-28-36w, had dug ponds.

Hugoton Gas Area

Texas Interstate Pipe Line Co. No. 1-8 Rickart, C SE section 8-35-39w, in the Morton County sector of the Hugoton gas field, produced 5,635,000 feet of gas and was completed at 2,854 feet, total depth.

Southwestern Kansas Oil & Gas Co. No. 2 Hallock, C SE section 36-33-39w, in the Stevens County sector of Hugoton, was a location.

H. R. Stroube, independent operator of Corsicana, Tex., and two sons, Jack and Reynaud, have left on a two weeks' fishing trip in the interior of Canada. They will take a boat from Duluth, Minn., to Fort Francis, Ontario.

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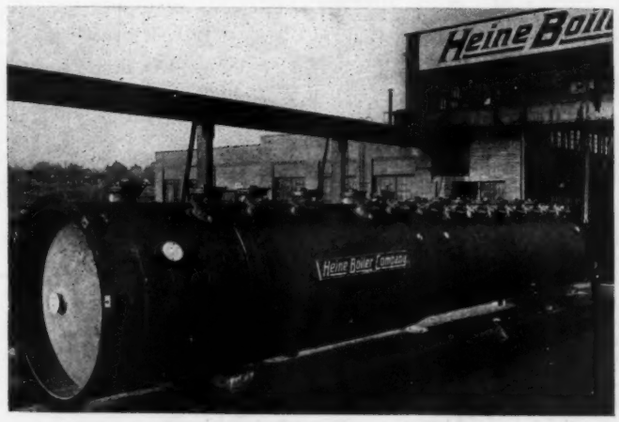

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By
F. L. SINGLETON

CALHOUN COUNTY OUTPOSTS ARE SHOWING POSSIBILITIES

HOUSTON, Tex., Aug. 17.—While a second potential test was being made on the discovery well of the Cotton Lake field in Chambers County, attention on the Gulf Coast has shifted to the Heyser field in northwestern Calhoun County where preparations are being made to test two important outpost wells after they had shown favorable possibilities on drill stem tests.

The two wells at Heyser are being completed by Humble Oil & Refining Co. and are north and northwest of the discovery well. No. 2 Welder, approximately 6,300 feet northwest in the Jose Maria Rios Survey, perforated liner from 5,664-60 feet with eight shots and from 5,470-71 feet with four shots and, on a 26-minute drill stem test through a three-fourths and three-eighths inch choke, it showed 15 pounds of working pressure and 480 feet of oil mud. To the north about 4,000 feet, No. 1-B Welder in the A. Sisneros Survey, is reaming to set casing after a 15-minute drill stem test from 5,484-5,500 feet showed 15 pounds of pressure and several hundred feet of oil and mud. Both wells are bottomed in sand at the approximate depth of the discovery well completed the latter part of May.

While these two wells are being prepared for completion, another outpost test is coring after showing salt water in the discovery horizon. It is Blanco Oil Co. No. 1 P. H. Welder about a mile northwest of the discovery and due east of No. 1-B Welder in the D. L. Palmer Survey. The test made from 5,498-5,548 feet showed 1 stand of mud, 45 stands of salt water and the operators are coring in shale with streaks of sand below 5,657 feet. Unless this test encounters a deeper sand it will be the fifth dry hole completed which indicates that the field will follow a north or northwest trend as the dry holes have apparently confined production in the other directions.

Cotton Lake

Glenn H. McCarthy, Inc., No. 1 Kilgore completed last week as the discovery well of the Cotton Lake field, Chambers County, flowed 218 bbls. of pipe line oil on a 25-hour gauge. For the first nine hours it flowed through an eight-sixty-fourths inch choke with tubing pressure 1,900 pounds and casing pressure 2,000 pounds. The last 16 hours it was flowing through a twelve-sixty-fourths inch choke with tubing pressure 1,950 pounds and casing pressure 2,100 pounds. On a 24-hour potential test made by railroad commission engineers through a quarter-inch choke, it flowed only 118 bbls., but the hole is reported to have sanded up and it was making gas at the end of the test. The operators have placed the well on an eighth-inch choke and after it has thoroughly cleaned itself another potential test will be made. The gravity of the oil has been corrected to 29 and there is no show of salt water.

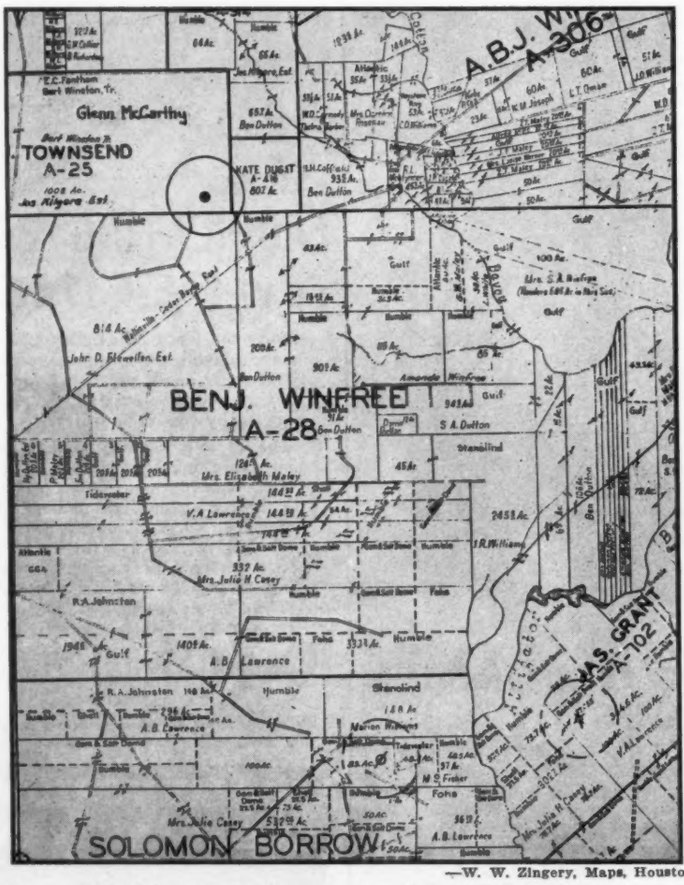
No. 1 Kilgore is producing from the Marginulina sand at 6,296-6,308 feet, the total depth, and is northwest of two dry holes in the J. Townsend Survey. The operators are moving the rig 932 feet west for No. 2 Kilgore and if production continues to hold up numerous locations are expected to be announced next week as leases around the discovery are held by various companies.

Anahuac

More acreage was opened for development at Anahuac in Chambers County by the completion of Humble Oil & Refining Co. No. 1 Boyt which flowed 706 bbls. per day through a quarter-inch choke with tubing pressure 1,050 pounds. It topped the sand at 7,126 feet and is producing from a depth of 7,129 feet. The well is about 1½ miles northwest of production in section 44, H.&T.C. Survey. Surface casing has been cemented in the company's No. 4 Johnson, a south offset in section 47. On the extreme west side of the north part of the field, Sun Oil Co. is moving in a rig for No. 1 Myra White, 2,100 feet west of the company's No. 16 White, the most westerly producer in the James McGahey Survey.

Three miles south of the town of Victoria and in the Felipe Dimmetti Survey, Portilla Oil Co. is reported to be running casing to test a gas sand bottomed at approximately 4,250 feet. In No. 1 P. H. Welder. Information on the well is "tight," but the well is reported to have shown considerable gas pressure on a drill stem test at around the approximate total depth. Across the line in Jackson County around the old Edna gas field, Steinberger Petroleum Co. No. 1 Drushel topped another sand at 7,078 feet and is fishing for stuck drill stem at a total depth of 7,155 feet. Numerous oil and gas showings have been encountered and it is being watched with much interest.

After running an electrical coring test to a total depth of 9,670 feet, Harrison and Abercrombie have cemented 7-inch casing on bottom in No. 1 Armstrong plantation in the Polly and Chance Survey. Several cores taken from 9,548-60 feet and 9,562-64 feet have carried good oil odors and a test of the various sands shown on the coring test will be made through perforated casing. The well is north of the company's two wells that are producing from an 8,600-foot sand and the operators are in hopes of opening a new horizon since the first two wells have shown a decline in production due to the encroachment of salt water. The discovery well, No. 1 Bernard, completed November 8, 1934, for an initial production of 362 bbls. of oil plus 25 per cent salt water with tubing pressure 1,600 pounds, is now making 169 bbls. of oil plus 60 per cent salt water and the tubing pressure has decreased to 425 pounds. No. 2 Bernard River was completed November 7, 1935, at a depth of 8,657 feet is flowing 189 bbls. plus 60 per cent salt water with tubing pressure 480 pounds.



—W. W. Zingery, Maps, Houston.

Cotton Lake prospect, showing location of Glenn H. McCarthy Inc. No. 1 Kilgore, the discovery recently completed in the Marginulina sand at 6,308 feet. Two dry holes previously drilled are located to the south

Production by Pool

Estimated daily average production of important fields in the Gulf Coast for the week ending August 15 was as follows:

TEXAS COAST

Name of field—	Daily average
Anahuac	7,989
Barbers Hill	15,027
Conroe	42,678
Hastings	7,365
Manvel	8,512
South Houston	5,125
Thompson	10,154
Tomball	7,547
Greta	15,312
Plymouth	9,739
Saxet Heights	6,949
Saxet	13,213
Miscellaneous	104,377
Total	253,978

LOUISIANA COAST

Bosco	12,937
Cameron Meadows	5,037
Caillou Island	14,678
Gillis	15,439
Iowa	15,340
Leesville	13,339
Roanoke	7,432
Tepetate	4,716
Miscellaneous	59,612
Total	148,539

Harris County

Houston Oil Co. No. 1 Helberg and Lackner, at Eureka Heights, Harris County, was washed in from a depth of 7,676 feet, August 9, making 2,500,000 feet of gas and some wash water through a three-sixteenths inch choke with tubing pressure 2,500 pounds and casing pressure 2,500 pounds shut in. The well developed

(Continued on Page 130)

Southwest Texas District

By
GEORGE WEBER

NEW POOL IN DUVAL COUNTY AND A SHOWING IN JIM HOGG

HOUSTON, Tex., Aug. 17.—The opening of a new producing area in Duval County, the indication of another such area in the same county, a wildcat showing in Jim Hogg County, and an oil test in a third sand of the Taft field, combined to keep the week's activity in Southwest Texas before the attention of South Texas operators. Drilling showed an increase in some districts, particularly in the fields of Nueces, San Patricio and Zapata Counties.

Discovery of the week was the opening of oil production by Conservative Oil Co. No. 2 Duval County Ranch Co. The test is located in Survey 51 about three miles northwest of the Sarnosa field. After testing salt water in sand at 1,543-54 feet, the wildcat was plugged back and perforated at 1,516-19 feet, where it was completed for an initial production of 113 bbls. per day. It is producing from the Cole sand, and although near the Colmena gas field, its relation to that structure has not yet been determined.

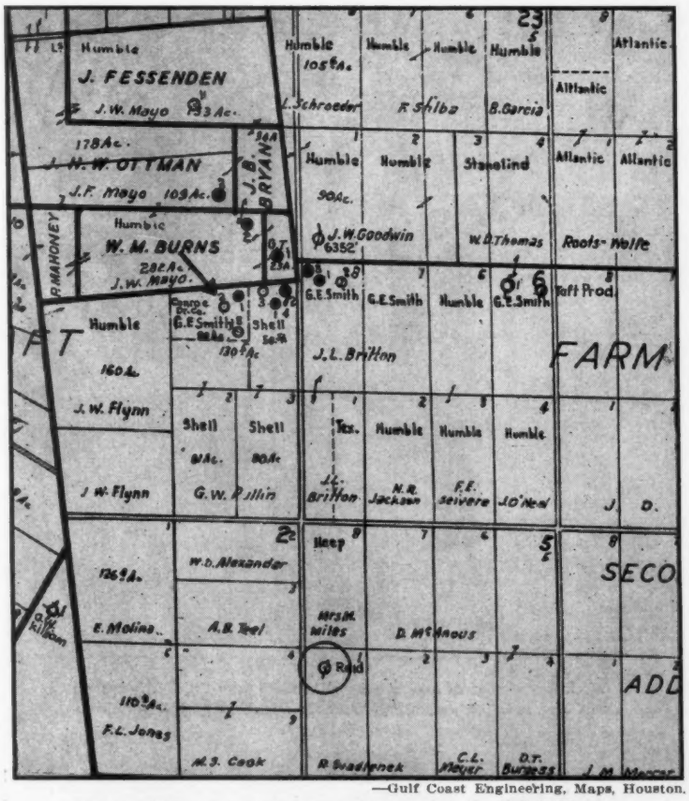
In the same county, another wildcat was attracting attention. It is the Intrepid Oil Co. No. 3 Parr, located northwest of San Diego in the southeast corner of Survey 26, about 6 miles northwest of the town of San Diego. Sand with a show of oil is reported to have been cored at 4,002-10 feet and casing was set. Plugs were drilled out over the weekend. This marks the third test that has been drilled in the immediate area by E. R. Thomas, president of Intrepid.

At the same time the two Duval County wildcats were showing for producers, three additional locations for wildcat tests were staked in the county. More than a mile to the south of the Conservative producer, that company has made location for the No. 3 D.C.R.C. It will be located in the north half of Black 17, Survey 53, and will be watched with interest due to its relative location with respect to other production in the area. Shell Petroleum Co. are rigging up on the No. 1 Taylor, in the southwest corner of the northwest quarter of Survey 214. Frank Buttram will drill a test in Survey 102, near the northeast corner of that survey, in the vicinity of the Eagle Hill and Seven Sisters fields. The test will be known as the No. 1 Nueces Land & Livestock Co.

Jim Hogg County

Jim Hogg County came in for a share in the spotlight during the week when the Meek No. 1-A Martinez showed probable indications of opening a new field. The test is located in Section 623, about 40 miles north of Rio Grande City, and 12 miles north of the Guerra field on the Jim Hogg-Starr County line. Sitting the week when Sam Payne made location for the No. 1 Holbien in Block 10, Share 3, Las Animas Grant.

vated on a 5,000-acre block the test showed 100 feet of oil on a drill stem test taken at 3,010-17 feet with 25 pounds working pressure. Casing was set and plugs drilled during the past week. The test at latest report had 769 feet of oil in the hole and was swabbing an average of 2½ bbls. per swab with the oil level showing no indication of lowering. Operators plan to install flow valves and attempt completion early in the coming week. This discovery will doubtless incite additional drilling in Jim Hogg County, an area which has been relatively quiet in the past few months. A new test for the Henne-Winch-Fariss field in that county was staked dur-



—Gulf Coast Engineering, Maps, Houston.

The possibility of production in a third sand in the Taft field was strengthened last week when Conroe Drilling Co.'s No. 2 Pullin tested 570 feet of oil and mud at 4,353-61 feet. A deeper test showed salt water, and the test will be carried to the 4,900-foot sand

Lower Coastal Area

The Lower Coastal region generally led in activity throughout the week, both in field and wildcat operations. In Nueces County the Saxet field received six new producers, five of which were in the newly opened from the west edge. To the southwest of the Pan American test, Mills Bennett Producing Co. are coring below 3,600, also headed for the 5,800-foot production. The Pan American test represents a west edge well at that particular point.

Taft Field

Another horizon for the Taft field showed during the week in the Conroe Drilling Co. No. 2 Pullin. The well was being drilled to the 4,900-foot sand as a twin to No. 1, which produces from the 3,900-foot level. A sand was cored at 4,353-61 feet which showed 570 feet of oil and mud. The drill stem test was made with ¼-inch top choke and ⅜-inch bottom choke, and the tool was open for 10 minutes. A working pressure of 18 pounds was recorded. Upon taking an additional 4-foot core and retesting, salt water was uncovered, and the test is now being carried to the 4,900-foot level. The showing enhances the importance of the field, though the sand is doubtless of a lenticular nature, occurring off structure. It illustrates the possibility of manifold sand production in fields of that district.

Saxet Heights

Saxet Heights or Corpus Christi saw a week of sustained activity with the completion of six new producers. Of these, one the Taylor Petroleum Co. No. 1 Robinson, extended production slightly in the southwest part of the field. It is located as a north offset to the Nash No. 1 Hatch, a dry hole which was drilled to a total depth of 5,000 feet without encountering any shows.

Smaller fields of Nueces County also showed activity. The Clara Driscoll field southwest of Corpus Christi is due for two additional tests shortly as the Santa Clara Oil Co. No. 3 Sevier and the Reed No. 1 Roper approach the sand producing the No. 1 Driscoll of Santa Clara. The Santa Clara No. 3 tested sulfur water in a sand at 3,270 feet.

Flour Bluff received a second new location, and the Gem Oil Co. test which has been staked for several days, was spudded in. The new location is Steve Paul's No. 1 Molter, in Block 16, section 41 of the Flour Bluff Encinal Garden Tracts. At the same time, in Austin a Railroad Commission hearing was being held to determine a spacing rule for the new field. A pattern of one well per 20 acres was advocated by a committee of operators and landowners. A potential test made on the discovery well of the field, Hurlburt's No. 1 Phillips during the week showed 30 bbls. of fluid per hour consisting of 5 per cent salt water, the first salt water show in the test since before its completion. The test was made through a ¾-inch choke and tubing pressures ranged from 800 to 1,200 pounds. The gas oil ratio was about 780 feet per bbl.

San Patricio County

San Patricio County operations showed an increase during the week with additional tests being staked in the Plymouth and Taft fields.

(Continued on Page 139)

Oklahoma Operations

By
DAL DALRYMPLE

TUSSY EXTENDED; NEW TEST STARTS IN BECKHAM COUNTY

Southern Oklahoma wildcats held the spotlight as they neared or tested deep pay horizons the past week, with one well extending the Tussy pool of Carter County across the line into southwestern Garvin County. This was the Winkler & McQueen No. 1 Davis, SE cor. section 32-1n-3w, two miles north of production in the older Tussy district and three-fourths of a mile from the nearest shallow sand pay. Some observers classed it as a new pool opener, but it was more generally looked upon as a Tussy extensioner. It had sands at 2,637 to 2,678 feet, total depth, and when plugs were drilled it showed for from 450 to 600 bbls. of oil daily. It was shut in for tankage after flowing for 20 minutes, then heading and producing about 50 bbls. of oil the first hour. Another southern Oklahoma wildcat showing as a producer was the Texas Co. and others No. 1 Cathey, section 6-5s-1w, Carter County. It previously had been completed as a small producer in sand at 4,186 feet, but recently was deepened to 4,377 feet and flowed 290 bbls. in three hours before being shut in for tankage.

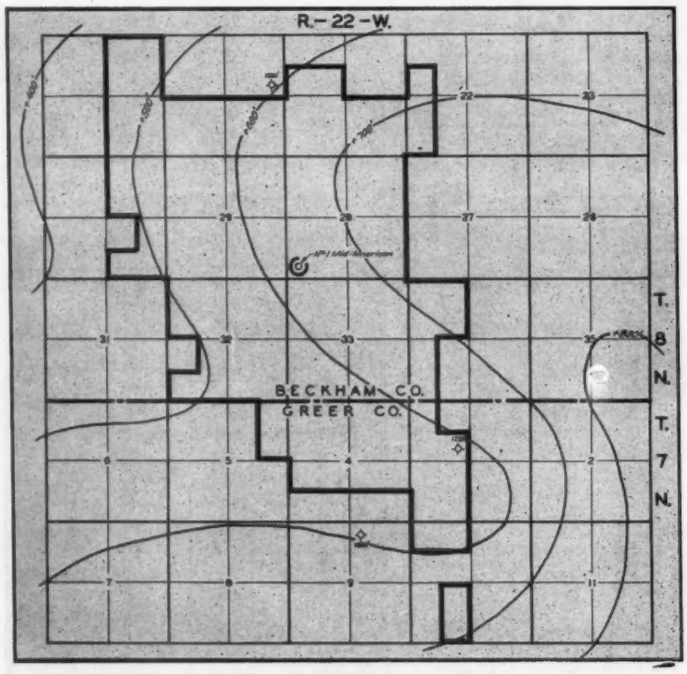
Work was started during the week at a far western Oklahoma test that was of more than ordinary interest. The Mid-American Oil & Royalty Co., of Oklahoma City, spudded last Friday at its No. 1 test in SW cor. section 28-8-22w, southern Beckham County. It is to be a 2,700-foot test, with the Granite Wash expected at around 2,000 feet. Location is on a big block in southeastern Beckham and northeastern Greer County, between the Wichita Mountains and the Sayre field. It is based on geology by Frank Gouin, Duncan, Okla., who said that the area is "worthy of testing because it is the only anticlinal feature between the Sayre field and the vicinity of Hobart, and production of high gravity oil and of gas has been found in the general area, with numerous showings encountered all over the area." The accompanying subsurface map was contoured by using the top of the Wichita-Albany or lower Permian "Big Lime" as a datum.

Location was announced for what is expected to be the deepest test ever drilled in Stephens County by Ed V. Parsons, Fort Worth wildcatter. His No. 1 Olson, C SW SW section 21-2n-8w, 13 miles northwest of Duncan, is scheduled for a 7,000-foot test on a 7,000-acre block. Shell Petroleum Corp. was starting work at No. 4-A Hill, in section 30-3-10, wildcat in the Chiles dome area of Coal County.

Daily average production in Oklahoma the past week was 601,450 bbls., the highest since August, 1933, when the total daily average was 615,218 bbls.

Eleven new producers were completed in the Fitts field of Pontotoc County. E. H. Moore and others No. 1-A Patrick, NW NW NE section 31-2-7, was completed as a producer in Wilcox sand at 4,410-40 feet, total depth. It made potential of 4,119 bbls. Top of McLish was 4,080 feet; Bird's Eye, 4,310 feet. Same operators' No. 4-A Atkins, SE NW NW section 32-2-7, flowed 2,018 bbls. in three hours through Hydril, from Wilcox sand at 4,303-50 feet. It was given a potential of 4,825 bbls. McLish was topped at 3,985 feet. Same operators' No. 11 Wirick, SE SW SE section 29-2-7, topped Bromide at 3,960 feet; McLish, 4,178 feet; Wilcox sand, 4,330 feet; total depth, 4,335 feet. It flowed 1,343 bbls. in four hours through Hydril; potential rating, 3,308 bbls. Moore and others No. 2 Cashin, NE cor. section 32-2-7, topped Viola at 3,700 feet; Bromide, 4,000 feet; McLish, 4,180 feet; Dolomite, 4,210 feet; sand 4,300-43 feet, total depth. It flowed 139 bbls. in two hours; potential, 1,626 bbls. Same operators' No. 3 Moody, NE SE SE section 22-2-7, flowed 388 bbls. of oil in one and one-half hours after acidizing and was given potential rating of 1,418 bbls. Top of Viola was 4,016 feet; Bromide, 4,300 feet; total depth, 4,330 feet. H. L. Blackstock and others No. 4-A Harden, SE SE NW section 30-2-7, topped Hunton lime at 3,340 feet; total depth, 3,635 feet. After perforating casing and acidizing it flowed 559 bbls. of oil through tubing and casing in three hours.

Other completions in Pontotoc County: W. A. Delaney No. 2 Killcrease, SE SW NW section 7-4-8, was completed as a Gilcrease sand producer after plugging back from 1,948 feet, total depth, to 1,943 feet. It pumped 50 bbls. of oil and 70 bbls. of water in 24 hours. Lake Oil Co. No. 7 Robertson, SE NE SW section 19-5-5, pumped 36 bbls. in 24 hours from Viola lime topped at 2,368 feet; total depth 2,468 feet. Mary F. Oil Co. and others No. 1-A Miller, SW NE SE section 16-5-8, had Allen sand at 915-30 feet, total depth, and swabbed and flowed 20 bbls. of oil in 24 hours.



Work has started at Mid-American Oil & Royalty Co. No. 1, section 28-8-22w, wildcat, on a big block in Beckham and Greer Counties, Oklahoma

Magnolia Petroleum Co. No. 3 Norris, NW SW SE section 21-2-7, flowed 574 bbls. of oil gross in one hour through casing after acidizing, and was given potential rating of 3,200 bbls. Viola was topped at 3,965 feet; Bromide, 4,245 feet; total depth, 4,355 feet. Same operator's No. 16 Metropolitan Life, SW SE SE section 22-2-7, topped Viola at 3,960 feet; Bromide, 4,248 feet; total depth, 4,340 feet. After acidizing, it flowed 1,018 bbls. in seven hours through casing and tubing, and was given potential of 1,917 bbls. Samedan Oil Co. No. 1-A Bates, NW SE NE section 27-2-7, flowed 300 bbls. of oil through tubing in two hours, and after acidizing flowed 464 bbls. through tubing in two hours. Production was from Hunton lime, topped at 3,302 feet; total depth, 3,372 feet. Same operator's No. 2 Bates, SW SE NE section 27-2-7, topped Bromide at 3,990 feet; McLish, 4,205 feet; total depth, 4,275 feet. It was acidized and flowed 150 bbls. in one-half hour through tubing, and made potential of 3,304 bbls. Sinclair Prairie Oil Co. No. 7 Burris, SW NE NW section 27-2-7, topped Hunton lime at 3,372 feet; total depth, 3,490 feet. After acidizing, it flowed 646 bbls. through tubing and casing in two hours.

New work in Pontotoc County: Sinclair Prairie Oil Co. No. 3 Woolley, SE SW SW section 22-2-7, digging cellar; same operator's No. 4 Woolley, SW SE SW section 22-2-7, digging cellar; same operator's No. 5 Woolley, SE SE SW section 22-2-7, digging cellar; Magnolia Petroleum Co. No. 22 Metropolitan Life, NW NW NE section 27-2-7, moving in tools; Deep Rock Oil Corp. No. 8 Harden, SE SE NE section 30-2-7, rig; Carter Oil Co. No. 21 Richards, NW NW SE section 30-2-7, cellar; same operator's No. 10 Harden, NE NE SW section 30-2-7, location; Joe Perrine No. 1 Roberts, NW NW SW section 31-5-5, old well being deepened, underreaming at 2,172 feet; Benedum & Trees No. 1 Burke, SW cor. section 28-5-5, old well, rigging up to deepen; same operator's No. 4 Browall, NW NE NW section 31-5-5, rig; Mary F. Oil Co. No. 2 Miller, SW NE SE section 16-5-8, total depth 387 feet, set 8 inch casing at 386 feet.

Oklahoma County

The largest of seven new completions in the Oklahoma City field, Oklahoma County, was Sunray Oil Co. No. 7 State, NW NE NE section 27-12-3w, Block 12, State Capitol Addition. It flowed 3,180 bbls. of oil in six hours, making potential of 13,725 bbls. Top of Wilcox sand was 6,355 feet; total depth, 6,492 feet. Phillips Petroleum Co. and Black Gold Refining Co. No. 2 D. F. Sawyer, NE cor. section 22-12-3w, topped second Wilcox at 6,369 feet; total depth, 6,452 feet. It flowed 2,886 bbls. in 24 hours, making potential of 11,770 bbls. Phillips Petroleum Co. and British American Oil Co. No. 1 Hagin, SW NE SE section 22-12-3w, Block 3, Neff Capitol Addition, flowed 2,464 bbls. in six hours from second Wilcox sand, topped at 6,382 feet; total depth, 6,478 feet. It made potential of 10,152 bbls.

Fairfax Oil Corp. No. 1 Vaught-Hickman, NE SE SW section 22-12-3w, Block B, Capitol Park Addition, topped second Wilcox at 6,416 feet; total depth, 6,490 feet. It flowed 999 bbls. of oil in six hours, making potential of 4,148 bbls. Apollo Oil Corp. No. 1 Ball, NW SW NW section 26-

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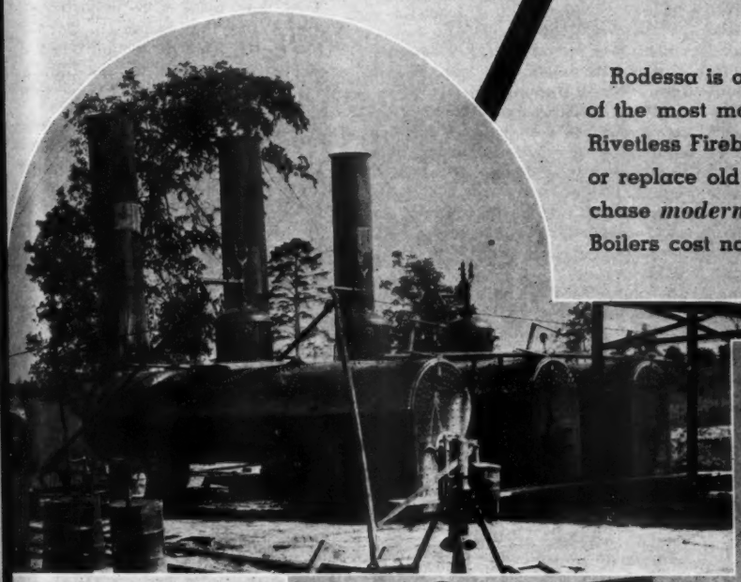
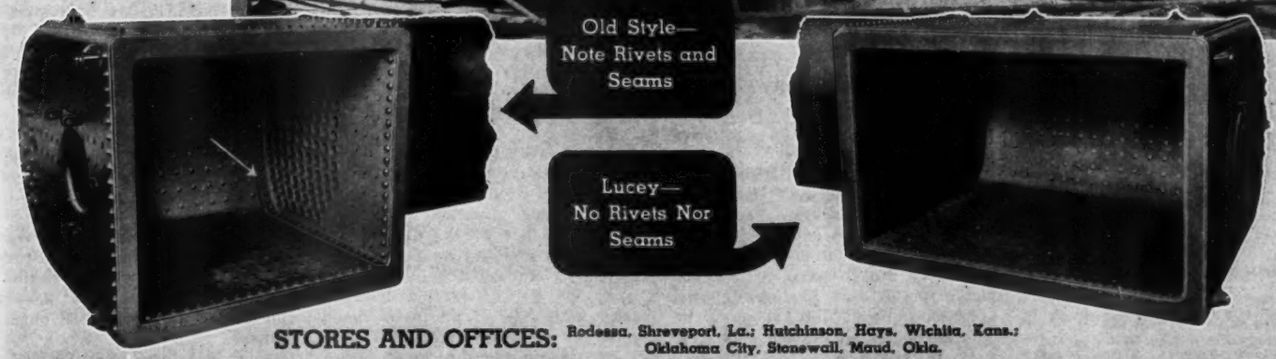


Battery of Lucey Rivetless Firebox Boilers of Sultana Drilling Co.—Rodessa, La., field.

Battery of Lucey Rivetless Firebox Boilers of R. J. Wolfe—Rodessa, La., field.



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OIL WELL SUPPLIES

TULSA, OKLAHOMA

12-3w, Block 6, Gast Heights addition, flowed 492 bbls. of oil, with 50 per cent salt water, on gas lift in 24 hours. It had School Land sand at 6,495 feet; total depth, 6,502 feet. British-American Oil Co. No. 1 Gast Heights, SW SW NW section 26-12-3w, had best pay at 6,335 feet; total depth, 6,506 feet. It flowed 89 bbls. of oil and 63 bbls. of water in 24 hours on gas lift. Big Chief Drilling Co. No. 1 Webster, SE SW SE section 27-12-3w, had Wilcox sand at 6,340 feet; total depth, 6,512 feet. It flowed 540 bbls. in six hours, making potential of 2,244 bbls.

In the Britton area, Clinkscales & Brown No. 1 Myers, NW SE SE section 17-13-3w, topped Dense at 6,325 feet and was bottomed at 6,636 feet. It flowed 15 bbls. of oil in 24 hours before acidizing, and 27 bbls. of oil in 24 hours after acidizing. Sinclair Prairie Oil Co. and Slick-Urschel Oil Co. No. 1 Kindblade, SE NE SW section 17-13-3w, flowed 25 bbls. of oil in 24 hours after acid treatment. It topped Simpson at 6,550 feet; first Wilcox, 6,690 feet; total depth 6,694 feet; plugged back to 6,679 feet.

New work in Oklahoma County follows: Sunray Oil Co. and Phillips Petroleum Co. No. 11 State, SW NE NE NW section 27-12-3w, Block 10, State Capitol Addition, building rig; Knox Garvin No. 1 Dallas Gray, SW NE SE SE section 27-12-3w, Block 14, Howe's Capitol Addition, rig; Sinclair Prairie Oil Co. and Slick-Urschel Oil Co. No. 2 Corbett, NW NW NE section 17-13-3w, location; Blackstock Oil Co. No. 1 Tegtmeyer, NE NE SE section 36-14-4w, digging cellar and pits.

Estimated Daily Production

Estimated daily average production in Oklahoma for the week ending August 15, and for the preceding week, is as follows:

	Barrels	
	Aug. 15	Aug. 8
Allen	9,450	10,150
Asher-West Asher	650	650
Burbank	7,900	7,900
South Burbank	15,700	16,750
Balance Osage	23,500	23,500
Blackwell district	4,675	4,775
Bristow-Slick	8,575	8,675
Chandler	4,375	4,425
Crescent	3,800	6,750
Cromwell	3,750	3,825
Cushing-Shamrock	11,550	11,575
Duncan district	4,150	4,200
Edmond	12,125	10,475
Fish	7,675	7,800
Fitts	64,650	45,700
Gray	1,650	1,600
Graham	4,600	4,950
Healdton	9,675	9,725
Hewitt	4,650	4,675
Holdenville	1,025	1,100
Keokuk	7,475	3,525
Konawa	1,850	1,500
Lucien	13,500	12,750
Marshall-Lovell	1,125	1,150
Oklahoma City	164,475	125,050
Olympic	9,450	8,125
Papoose	1,050	1,075
Polo	2,950	2,925
Sasakwa and townsite	3,575	3,400
Sholem-Alechem	3,575	3,700
Seminole field:		
Bowlegs	12,425	10,625
Carr City	6,850	4,625
Earlsboro	7,150	7,325
South Earlsboro	950	900
East Earlsboro	10,750	10,300
Little River	13,225	13,300
East Little River	1,200	1,100
Maud	975	1,100
Mission	2,450	2,175
Seminole	10,250	9,525
East Seminole	4,200	4,325
Searight	5,900	5,325
Total Seminole	76,325	69,525
St. Louis-Pearson	24,150	22,525
Tatums	3,275	3,425
Tonkawa-Garber-Thomas	5,500	5,600
Wewoka	4,025	4,125
Yale-Jennings	4,175	4,200
Other pools	70,850	70,500
Total Oklahoma	601,450	532,300

Seminole County

Three new producers were completed in Seminole County. Sinclair Prairie Oil Co. and others No. 1 C. Harjo, SE NE NE section 10-6-6, had sand series at 2,350 feet; total depth, 2,614 feet. After a shot, it flowed 16 bbls. of oil with 2,000,000 feet of gas in 24 hours. Al Speirs and others No. 4 Aldridge, NW SW NE section 7-6-8, topped Gilcrease sand at 2,864 feet; was bottomed at 2,925 feet; plugged back to 2,903 feet and shot. It swabbed 91 bbls. of oil in 13 hours. Wood Oil Co. No. 1 Reed, NE NW SE section 19-9-7, flowed 52 bbls. of oil in 24 hours through tubing, from Cromwell sand topped at 3,483 feet; total depth, 3,493 feet.

The following new work in Seminole County was reported: Vierson, Hayes & Reynolds Drilling Co. No. 1-A Carolina, SE SW NE section 4-6-7, wildcat, drilling at 535 feet. B. F. Green No. 3-A Spillman, SE NW SW section 7-6-8, cellar and pits; Blackwell Oil & Gas Co. No. 6 Baker, SW NW SE section 11-7-6, set 10-inch casing at 44 feet; Tom Phillips and Kimrow Drilling Co. No. 1 Thompson, SW NE NW section 19-9-7, location; Sinclair Prairie Oil Co. No. 4 Thompson, SE SE SW section 18-9-7, building rig; Ross Oil Co. No. 1 Hollis, NE SE NE section 17-9-7, cellar and pits; Amerada Petroleum Corp. and others No. 1 Riddle, NW NW NE section 2-10-5, location; same operator's No. 1 Parks, SE SE SW section 35-11-5, digging cellar; Carter Oil Co. and others No. 5 Aldridge, C N half NW NE section 35-11-6, rig.

Hughes County

Sinclair Prairie Oil Co. No. 14 Oliphant, NW SE SE section 1-9-8, in the Olympic area, Hughes County, topped Senora sand at 1,651 feet; total depth, 1,701 feet. It was shot with 60 quarts and flowed 247 bbls. of oil in 24 hours, completed. Mid-Continent Petroleum Corp. No. 1 White, C SW SE section 5-8-10, had Cromwell sand at 3,090 feet; total depth, 3,096 feet, and produced 3,000,000 feet of gas. McGee Brothers No. 2 Lucas, SW SE SW section 1-9-10, was dry and abandoned at 1,200 feet, total depth. Sinclair Prairie Oil Co. No. 1 Proctor, C SE NE section 11-7-8, an old well, was deepened from 2,949 feet to 3,117 feet, and was dry and abandoned.

Work starting in Hughes County: Canavan & Davis No. 1 Burke, C NW NE section 8-8-10, drilling at 2,375 feet; Southern Oil Co. No. 1 Buck, NW SW SW section 21-8-10, rig on ground; Sinclair Prairie Oil Co. No. 15 Oliphant, SW SE SE section 1-9-8, location; Blackwell Oil & Gas Co. No. 1 Yargee, SE NE NW section 29-9-9, old well being deepened, drilling at 2,940 feet.

Osage County

Osage County completions included two new South Burbank producers. Kewanee Oil & Gas Co. No. 6 Hale, NE SE SE section 27-26-6, topped Bartlesville sand at 2,830 feet; total depth 2,926 feet; plugged back to 2,921 feet, was shot and flowed 1,104 bbls. of oil in 24 hours. Sinclair Prairie Oil Co. No. 3 Osage, SE NE SW section 9-25-6, had Bartlesville sand at 2,806-28 feet, total depth, and pumped 5 bbls. of oil and 4 bbls. of water in 24 hours.

Continental Oil Co. No. 12 Lessert, NW SE SE section 21-24-7, flowed 221 bbls. of oil in 24 hours after a shot and was completed in Bartlesville sand at 2,557-2,661 feet, total depth. Peters Petroleum Co. No. 10 Osage, NE SW NW section 32-24-9, pumped 20 bbls. of oil in 24 hours after acidizing. It had pay at 1,787 feet; total depth, 1,805 feet. Harland Oil Co. No. 79 Osage, SE SW NE section 25-24-11, had Bartlesville sand at 1,611 feet; total depth, 1,803 feet, and pumped 3 bbls. of oil in 24 hours. T. O. Lilystrand No. 5 Osage, NW SE SE section 14-21-10, had water in the hole from sand at 1,933-85 feet, total depth, and was abandoned.

New work starting in Osage County was as follows: Carter Oil Co. and others No. 9 Adlum, NE SE NW section 10-25-6, cellar; Kewanee Oil & Gas Co. No. 1 Alfred, NW SW NE section 26-26-6, building rig; same operator's No. 8 Renald, SE NW SW section 26-26-6, building rig; Carter Oil Co. No. 7 Transit Mosier, NW SW NE section 34-26-6, cellar.

Okfuskee County

Four new operations were reported in Okfuskee County. Manahan & Grisso No. 11 Dalton, SE SE SW section 36-10-8, was a rig. Blackwell Oil & Gas Co. No. 4 Dalton, SE NE NE section 36-10-8, was building rig; Ark Royalty Co. No. 2 Fisher, SE SW SE section 18-10-9, had dug cellar and pits; and Sinclair Prairie Oil Co. No. 4 Carolina, SE NW SW section 31-10-9, was a location.

Cleveland County

Sinclair Prairie Oil Co. and others No. 1 Community Marvel, NW SW NE section 21-10-2w, in the Cleveland pool, Cleveland County, topped second Wilcox sand at 7,240 feet; total depth, 7,267 feet. On completion test, it flowed 3,424 bbls. of oil in four hours, making potential of 20,509 bbls. Gas averaged 93,980,000 feet the last three hours of test.

Lincoln County

Amerada Petroleum Corp. and others No. 1 Zimmerman, SW SW NE section 10-12-5, wildcat pool opener southwest of the Wilzetta area, Lincoln County, swabbed and flowed 320 bbls. of oil and 212 bbls. of water in 24 hours, and later pumped 178 bbls. of oil and 300 bbls. of water in 24 hours. Production was from Hunton lime, topped at 4,338 feet; total depth, 4,358 feet. It was acidized with 1,000 gallons. Magnolia Petroleum Co. No. 1 Lewis, SW SW SE section 32-15-3, in the Hoyt area, topped Wilcox sand at 5,040 feet; total depth, 5,042 feet, and flowed 1,748 bbls. through casing in 24 hours. Mid-Continent Petroleum Corp. and Texas Co. No. 1 Hillman, SW SE NE section 29-13-6, wildcat northeast of Wilzetta, was dry and abandoned at 4,468 feet, total depth. Magnolia Petroleum Co. No. 2 Telford, NW SW SE section 7-14-4, an old well, was deepened from 5,002 feet to 5,043 feet, salt water intruded and it was dry and abandoned.

Carter County

Ben G. Barnett No. 5 Lynn, NE NW NE section 31-1s-2w, Carter County, topped lime at 1,400 feet; was bottomed at 1,500 feet; pumped 10 bbls. of oil in 24 hours and was completed. Karchmer & Smith No. 4 Lynn, NW SE NE section 31-1s-2w, pumped 35 bbls. of oil in 24 hours and was completed at 1,724 feet, total depth. Skelly Oil Co. No. 2 Blair, NW NE SW section 9-2s-2w, drilled to 1,891 feet, total depth; plugged back to 1,670 feet, acidized and pumped 115 bbls. in 20 hours. Cox-Hamon No. 26 Wesley, NW SW SW section 3-4s-3w, had oil sand at 852-920 feet; total depth 1,099 feet; was shot with 100 quarts and pumped 24 bbls. in 24 hours. Shell Petroleum Corp. No. 11 McClure, NE NE SW section 5-4s-3w, an old well, was deepened from 1,045 feet to 1,095 feet; plugged back to 1,092 feet and pumped 15 bbls. of oil and 35 bbls. of water in 24 hours. Same operator's No. 43 McClure, NE NE SW section 5-4s-3w, had sand at 1,027-77 feet; total depth, 1,083 feet; pumped 100 bbls. of oil in 24 hours and was completed. W. Neustadt No. 5 Dillard, SE SW NE section 22-4s-2w, an old well, was deepened from 2,597 feet to 2,648 feet, pumped 25 bbls. in 24 hours and was recompleted. Simpson-Fell Oil Co. No. 1 Byrd, SW cor. section 4-2s-2w, an old well, was deepened from 1,389 feet to 1,614 feet, was acidized and recompleted as a 1-bbl. pumper.

Two new tests were reported in Carter County. Samedan Oil Co. No. 4 Eaves, NE SW NE section 6-2s-2w, was rigging up rotary. Cox-Hamon No. 27 Wesley, SW NW SW section 3-4s-3w, was drilling at 250 feet.

Marshall County

The only completion in Marshall County was Levelle Coal Co. No. 7 Brent, C S half N half SE section 1-8s-5e. It had sand at 499-518 feet, total depth, and pumped 29 bbls. of oil and 6 bbls. of water in 24 hours.

Pottawatomie County

Magnolia Petroleum Co. No. 2 N. Vieux, NW NW SE section 13-7-4, in the St. Louis district, Pottawatomie County, topped Hunton lime at 3,597 feet; Wilcox sand, 4,170 feet; total depth, 4,207 feet. It was plugging back to 3,862 feet, acidized and swabbed 171 bbls. net in 24 hours. It was the only completion in the county.

Garfield County

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 1 Brunken, SW SW NE section 32-23-4w, wildcat northwest of the Garber area, Garfield County, was dry and abandoned at 6,521 feet, total depth. It topped Polomite at 5,935 feet; first Wilcox sand, 5,975 feet; second Wilcox sand, 6,033-6,168 feet; Arbuckle lime, 6,319 feet.

Kay County

Shell Petroleum Corp. and Continental Oil Co. No. 1 Lawrence, C S half SE NW section 5-28-1w, Kay County, an old well, was rigging up to deepen from 2,395 feet, old total depth.

Noble County

Phillips Petroleum Co. and Shell Petroleum Corp. No. 3 McCaughtry, NE SE NE section 21-23-2w, in the Billings area, Noble County, was a cellar.

Logan County

Petroleum Producers, Inc., and others No. 1 Schlopp, C E half E half SE section 32-20-2w, in the Lucien area, Logan County, was a location.

Okmulgee County

The only well completed in Okmulgee County was American-Maracaibo No. 3 Bullett, NE SW NE section 27-12-12. It was bottomed at 2,637 feet and produced 8,000,000 feet of gas in 24 hours.

One new test in Okmulgee County was reported. W. B. Pine No. 1 Beams, NE NE SW section 4-15-14, rigged up and shut down.

Tulsa County

Johnson Oil Refining Co. No. 2 Holmes & Bailey, SE NW NE section 31-19-10, Tulsa County, was dry

(Continued on Page 123)

North Louisiana, Arkansas

ACTIVITY GREATER IN TEXAS NOW THAN ON RODESSA SIDE

By MITCHELL TUCKER

SHREVEPORT, La., Aug. 17.—For the first time since the Rodessa discovery, activity is now greater on the Texas side of the field than on the Louisiana side. The vast acreage proved for production by the recently completed extension wells into Cass County have served to bring this migration of drilling activity about. The situation was further encouraged by the recent transfer of the R. W. Norton properties to Magnolia Petroleum Co., which immediately began extensive development on the Texas side. Rigs or drilling wells in Texas now number 39, while there are only 33 on the Louisiana side. Seven Louisiana completions were recorded for the week, with none in Texas.

Completion of the second gas well in North Louisiana to produce from the Travis Peak formation featured the wildcat news for the week, while interest remains high in the many other important deep tests being drilled on practically every known structure in the North Louisiana and southern Arkansas region, many of which are nearing the testing point.

Estimated Production

Estimated daily gross production of all companies for the week ending August 14, 1936, follows:

NORTH LOUISIANA

	Bbls.
Bellevue	850
Caddo, light	3,966
Caddo, heavy	2,520
Converse	915
Cotton Valley	300
DeSoto and Red River	1,490
Elm Grove	365
Haynesville	3,350
Holly	130
Homer	2,565
Pleasant Hill	150
Rodessa	58,785
Sarepta-Carterville	475
Urania	2,850
Zwolle	1,075
Total	79,780

SOUTH ARKANSAS

Champagnolle	2,650
El Dorado	3,130
Lisbon	285
Miller County	750
Nevada	565
Smackover, light	2,200
Smackover, heavy	18,000
Stephens	590
Urbana	1,730
Total	29,200

Texas side of Rodessa field 7,475 bbls. daily.

Rodessa

The engineering committee of the recently organized Rodessa Operators Committee held its first meeting this week, at which time subcommittees were appointed to study bottom-hole pressures, salt water encroachment, gas-oil ratios, and other subsurface problems. H. W. Bell of Shreveport has been appointed engineer for the committee, and he is to be assisted by engineers from the various participating companies in the Rodessa field.

Following the recent decision by operators and Louisiana conservation officials that gas wastage must be reduced at Rodessa, all possible means of accomplishing this purpose are being considered. Standard Oil Co. of Louisiana made the first step when it moved in rig on No. 5 Lawton, section 14-23-16, completed several months ago, to rework the well in an effort to lower the gas-oil ratio. The use of packers is being considered by some operators, although this practice is not feasible in all cases. The setting of what is known as "short strings" at or below the point of gas-oil contact will be used in many high gas-oil ratio wells. This is accomplished by running a complete string of casing, usually 5-inch, to the desired point that will conserve the most upper formation gas, and cementing up into the oil string. The pipe is then ripped or backed off just above the top of the cement, leaving the cemented liner at the proper place in the well.

Extending Play

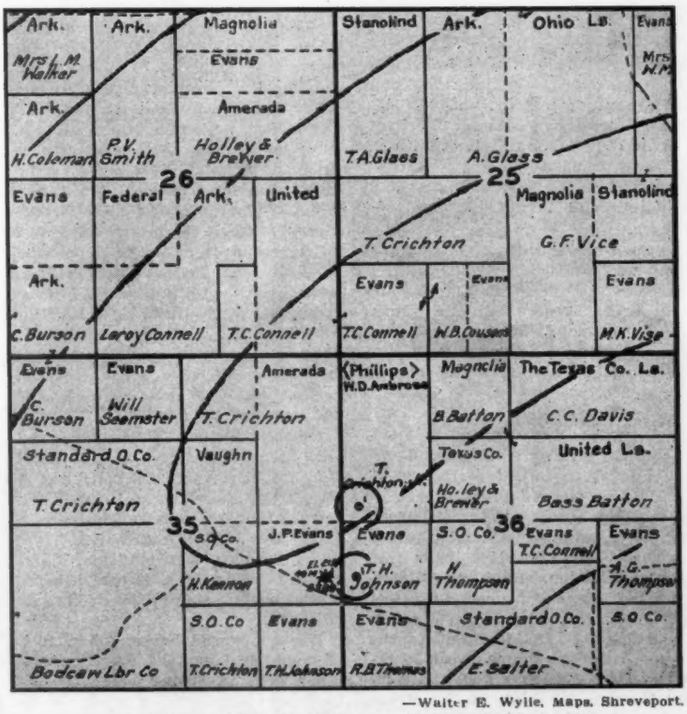
Prompted by recent favorable extension wells to the north and east, lease play has now extended beyond the town of Ida up into as far distant points as Spring Branch, Miller County, Arkansas. Every town lot at Ida is now under lease, and test wells in this vicinity are expected in the near future.

J. E. Jones Petroleum Co. erected derrick this week for the drilling of No. 1 Madie Z. Sharp in the SW NW SE of section 4-23-15, 1 mile north of present production, and one-half mile south of the Miller County, Arkansas, line. The outcome of this well will go a long way in determining whether Rodessa is ever to graduate from a bi-state to a tri-state field.

Seventeen of the 258 wells on the Louisiana side of Rodessa are now producing only distillate, most of them being in or near the vicinity of the townsite between the fault line and the point of gas-oil contact. Many of these wells are not capable of making 250 bbls. daily, their allowable, and as a result Louisiana wells averaged 228 bbls. production per day per well last week. The Texas wells averaged 249 bbls. per day last week.

Daily average pipe line runs by the six major trunk lines during the week ending August 11 were: Standard Pipe Line Co., 22,805 bbls.; Arkansas-Louisiana Pipe Line Co., 5,913 bbls.; Gulf Pipe Line, 12,933 bbls.; United (formerly East Texas), 6,509 bbls.; Magnolia Pipe Line, 18,788 bbls., and Texas Pipe Line, 2,752 bbls. A total of 349,011 gallons of natural gasoline was moved from the Rodessa plants during last week.

Each horizon in the Glen Rose section of Middle Trinity has now been found productive of oil at Rodessa. These horizons are usually referred to as the Hill, Gloyd, Dees and Young, occurring in the order named. As a general rule the Hill carries only gas, although the Blackwell Oil & Gas Co. No. 2 Neugent, section 8-23-15, northeast extension well, was completed for 22 bbls. an hour through one-quarter inch tubing choke in the Hill sand. Two wells have found oil saturation in the Gloyd on the Louisiana side, while last week Magnolia Petroleum Co. No. 3 Haywood, Priscilla Evans Survey, was completed for 15 bbls. per hour from the Gloyd, after plugging back from 6,047 feet, where only salt water was encountered.



—Walter E. Wylie, Maps, Shreveport.

Important tests of Sibley-Dubberly area, Webster Parish, Louisiana, where oil is expected offsetting the recent gas-distillate discovery

Rodessa Completions

Rodessa completions for the week follow: Arkansas-Louisiana Gas Co. No. 21 Rodessa Oil & Land Co., SW cor. section 23-23-16, flowed 15 bbls. per hour initially through one-quarter inch tubing choke, total depth 6,015 feet. Magnolia Petroleum Co. No. 7-A Caddo Levee Board, NE cor. section 28-23-16, 22 bbls. per hour through 3/32-inch tubing choke, total depth 5,973 feet; No. 2 Slattery, NW cor. section 28-23-16, flowed 9 bbls. per hour through a one-eighth inch tubing choke, total depth 6,000 feet; No. 5 Tyson heirs, SE NW section 13-23-16, flowed 11 bbls. per hour through three-sixteenths inch tubing choke, total depth 6,049 feet. United Gas No. 2 Lindsay Maround Unit, NE NW NW section 24-23-16, flowed 15 bbls. per hour through one-quarter inch tubing choke, total depth 6,080 feet; No. 1 Teamer, NW NE NW section 24-23-16, completed for an initial flow of 44 bbls. per hour through one-half inch tubing choke, total depth 6,060 feet; No. 8 Thomas Unit, Lot 1, Block 7, section 23-23-16, flowed 38 bbls. per hour through one-half inch tubing choke, after acidizing with 1,500 gallons, total depth 6,020 feet.

Bienville Parish

Attention is now being centered upon J. W. Leonard No. 1 Courtney heirs, section 5-17-7, as it drills and cores below 5,400 feet. A small showing of gas was reported above this depth. This well is about 10 miles due east of the J. P. Evans No. 1 Crichton gas-distillate discovery well in the Sibley area of Webster Parish.

Bossier Parish

A portion of the southwestern flank of the Sligo gas field was condemned for deep oil or gas production this week when Producers Oil & Gas Co. No. 1 Webb, SW cor. section 22-17-12, found only salt water in both the Pettit sand and the Glen Rose. The test has been abandoned at 5,274 feet.

Triangle Drilling Co. No. 1 Skannal Unit, SE cor. section 23-17-12, showed 25,000,000 feet of gas on drill stem test in the Pettit sand, 5,140-72

feet. Schlumberger test is now being made.

Premier Investment Co. of Fort Worth completed another shallow well in the Bellevue pool, No. 22 Wyche, section 14-19-11, for a pumping initial of 75 bbls. per day, total depth 425 feet. Two additional locations were staked nearby.

Caddo Parish

Prairie River Syndicate No. 1 Hutchinson, section 15-12-12, is drilling below 5,475 feet after finding the Glen Rose section nonproductive. The test is to be deepened in search of saturation in the Pettit sand present in the Sligo gas field.

Three routine completions were made in the Caddo field. Simplex Oil No. 4 Natalie, SE NW SE section 10-20-15, pumped 190 bbls. per day, total depth 2,206 feet. Stanolind No. 105 Dillon heirs, SE cor. section 14-21-15, pumped 65 bbls. per day after acidizing, total depth 1,736 feet. Leonard Co. completed No. 1 Shreveport Oil Corp. for a pumping initial of 5 bbls. per day, total depth 2,190 feet.

United Gas Public Service Co. completed its Blanchard test, S. R. Wheeler No. 1-A, NE cor. section 16-18-16, as a gas well in the Travis Peak formation, total depth 5,911 feet. On official test the well gauged 2,900,000 feet, although operators expect the flow to increase after the well has cleaned itself.

The important fact in connection with this test is that it is the second well in North Louisiana to produce from the Travis Peak formation, lower member of Middle Trinity, and operators in this area are now provided with still another deep objective. The first well to find gas production in the Travis Peak was Brown, Lide & Greer No. 1 Gardner, section 10-17-14, Lincoln Parish, about 80 miles to the east of the United's recent completion.

Claiborne Parish

After encountering a gas sand of unknown proportions, near 8,300 feet, Triangle Drilling Co., United Gas, and Standard of Louisiana No. 2 Durrett, SW cor. of section 31-20-5, deep test of the Sugar Creek gas field, continues to drill and core sand at about 8,425 feet. The bit is reported to be now in the lower Trinity beds.

Another test of the Sugar Creek gas field, E. T. Oakes No. 1 W. H. Patton, NE cor. section 1-20-5, is drilling and coring below 4,510 feet in red shale and sand, after leaving the base of the massive anhydrite at 4,238 feet.

DeSoto Parish

Union Petroleum Co. had what appeared to be a new producer in its No. 2 Rascoe, NW SE section 3-10-13, after coring a heavily saturated section at 3,041 feet. Preparatory to testing, 6-inch casing was cemented at 2,990 feet. This showing was from the Washita sand of the lower Cretaceous and further proves the shallow beds of the well-known Benson structure.

One major company now has under consideration the immediate drilling of an 8,000-foot Paleozoic test in this area.

Sabine Parish

The shallow Converse field deep test, Cox & Whitehurst No. 1 Whitney Corp., NW NE section 8-9-13, is drilling and coring for the top of the Glen Rose members below 5,100 feet.

A. H. Tarver No. 2 Baker, section 36-8-12, important Glen Rose test of the shallow Zwolle field, is reported to be reaching the critical point as it drills ahead below 5,150 feet.

J. R. Keen No. 1 Long Bell Mining Co., SE NE SW section 5-8-13, has been plugged and abandoned at a depth of 2,069 feet, after acidizing failed to bring the well into production.

Union Parish

The two deep tests for oil on the flanks of the Monroe gas field are soon to come into prominence. Federal Petroleum Co. No. 1 fee, NE cor. of section 34-21-3, northwest flank of the field, is drilling below 5,600 feet without encountering important markers. The same company's No. 2 fee, SE NE of section 5-19-3, on the southwest flank of the Monroe gas field, is drilling below 4,150 feet.

Webster Parish

All hope of North Louisiana having another major oil field within the near future is being centered on the two tell-tale wells drilling in the Sibley area of Webster Parish. The gas-distillate discovery well here, J. P. Evans No. 1 Crichton, section 35-18-9, continues to make about 100 bbls. of distillate with about 5,000,000 feet of gas on restricted choke. The two wells now drilling here are to thoroughly test the entire section for points of oil accumulation, and many informed geologists think major oil production is quite probable. J. P. Evans No. 1 Johnson, NW SW section 36-18-9, is drilling at 4,863 feet, while W. D. Ambrose No. 1 Crichton, SW NW section 36-18-9, drills below 4,400 feet.

The territory's deepest test, Ohio Oil Co. No. 6 Holloway, section 23-21-10, is reported to be having difficulty in drilling under immense pressure encountered below the 7-inch casing, which was set at 8,478 feet. Gas pressures have been said to be as high as 4,000 pounds. Three gas zones were cased off by the 7-inch, and operators are now giving consideration to perforating the pipe opposite these zones and completing the well as a gasser from the four deep gas-bearing sands.

ARKANSAS

Bradley County

Phillips Petroleum Co.'s important Permian lime test, No. 1 C. H. Murphy and others, NW cor. section 12-17-11, is now shut down repairing rotary at a depth of 5,320 feet, in hard dense lime.

Columbia County

Eastern Texas Production Co. began moving in material this week for its important test on a geophysically mapped structure in the NW SE of section 7-19-18, to be known as No. 1 Kendrick.

J. C. Buckbee No. 1 Wilson, section 17-17-18, was plugged and abandoned at a depth of 4,510 feet after failing to encounter favorable indications to that point.

Miller County

King Oil Corp. No. 1 G. W. Crank, SW NE of section 19-16-25, has been plugged and abandoned in hard lime at 3,906 feet. It abandoned its No. 1 Mann, NW NW SE section 2-16-26, after drilling to 3,356 feet in gummy lime without favorable showings.

Ouachita County

Phillips Petroleum Co. No. 1 A. Cheatham, NW NE section 27-15-15, continues to be the most encouraging producer in the Snow Hill area as it showed for 12,000,000 feet of gas on drill stem test 4,900 to 4,914 feet, with a spray of oil estimated as high as 600 bbls. per day. Casing has been set on bottom, 4,917 feet, and pipe will be perforated and test of the well taken soon.

After blowing wild for several days Lion Oil Refining Co. No. 3-B Berg & Reynolds, SE NE section 28-15-15, has been brought under control. Operators are circulating and reconditioning mud while preparing to wash in the well.

Union County

The deep test on the eastern edge of the El Dorado field was abandoned this week at 6,003 feet, after streaks of sand from 5,029 feet to total depth was found to contain only salt water. This wildcat test is described as J. C. Buckbee, trustee, No. 2 Ezzell, SW NE NW section 13-17-15.

EAST TEXAS (Border Counties)

Eight geophysical crews continue seismograph mapping in the border counties of eastern Texas. In Bowie County, the Humble Oil & Refining crew is working between Carbondale and Bassett, and the Stanolind crew is detailing between Redwater and Texarkana in the Eli Tarrant Survey. In Harrison County the Amerada crew is working from 3 to 5 miles east of Harleton; Arkansas-Louisiana crew continues near the Waskom gas field; the Seaboard unit remains active in the county, while the Sinclair crew works between Marshall and Hallsville. In Panola County, Shell Petroleum Corp. unit is detailing south of Carthage, Shelby County, Pure Oil Co. is active from the town of Center to Shelbyville.

Large blocks of acreage in these counties are being assembled, mostly by out-of-state interests. The extent of this leasing will not be known until leases are placed on file.

Panola County

A. C. Glassell sold to Humble Oil & Refining Co. a $15,000 spread in his

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Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, Aug. 15.—Deliveries to the Calgary refineries from the Turner Valley field in July amounted to 101,322 bbls., the highest monthly figure for the year. This compared with a June total of 79,479 bbls. The July total included 33,530 bbls. to Bell Refining Co. made up of 25,430 bbls. from Turner Valley Royalties No. 1, 1,578 bbls. from Highwood-Sarcee Oils No. 1, 480 bbls. from Mar Jon Oil Co., 5,281 bbls. from Model Oils, Ltd., and 661 bbls. from other producing units. Deliveries to Imperial Oil Refineries, Ltd., in July included 4,247 bbls. of clear naphtha, 61,457 bbls. of discolored naphtha and 2,188 bbls. of light crude.

The average monthly delivery last year was 80,710 bbls., and the July increase was due to the new production from Turner Valley Royalties No. 1, averaging more than 850 bbls. a day. The recorded deliveries do not include oil in storage at the end of the month.

Highwood-Sarcee Testing

Interest centers in Highwood-Sarcee Oils No. 2, LSD 1, section 21-18-2w5, which stopped drilling 860 feet in the lime at 6,560 feet, and is testing. After bailing considerable rotary mud, the well failed to blow into large production, and it was discovered the hole had bridged 1,022 feet off bottom, due to casing collapsing about 150 feet from the end of the string. A wet gas flow between 2,500,000 and 3,000,000 feet a day is coming through the kink in the string and is run through the separator, yielding some 57 gravity crude. Special tools are being used to enlarge the casing and permit production. The well is the southernmost producer, and about a half mile south of Union-Freehold No. 1, which finished as a small naphtha producer.

Imperial Oil Activities

After several years of almost complete inactivity in Alberta drilling operations, Imperial Oil, Ltd., is extending its operations in the Turner Valley field and elsewhere. It is aiding in four wells in southern Alberta, of which two may open new territory. In Turner Valley the company is interested in two tests on the west side. Sterling Pacific No. 3, LSD 13, section 33-18-2w5, is below 4,615 feet after passing through the Home sand at 4,310 feet. In the southwest corner, Royalite-Sterling No. 4, LSD 4, has spudded. It offsets Turner Valley Royalties No. 1 crude producer to the north. Imperial is also interested in Dalhousie Oil Co. No. 8, LSD 11, section 30-19-2w5, another west side test working on derrick.

Outside Turner Valley, Imperial Oil, Ltd., is sharing with Canadian Western Natural Gas, Light Heat & Power Co. and Calgary & Edmonton Corp., Ltd., in Arca Development Corp. No. 1, NW section 24-18-1w5, about 8 miles west of High River, which is below 5,352 feet with a potential oil horizon at 7,000 feet as its objective.

While Imperial has an abundance of naphtha from the Royalite and other wells in Turner Valley, it has to import considerable crude to be mixed with the naphtha at the Cal-

Continued on Page 150)

6,187-acre block centering in the John Gibson Survey. He is asking $50 per acre for tracts nearby. The Glen Rose test of this block, located on the Mary S. Potts Survey, is now drilling at 2,750 feet.

Pure Oil Co. leased 1,001 acres from the Marshall Lumber Co. northeast of Carthage and adjoining Glassell's block to the north.

Danciger Oil & Refining Co. has made tentative location for No. 1 J. W. Tatum in the Alfred Bissel Survey, planned as a 6,000-foot test of Middle Trinity possibilities. This location is reported to be a subsurface high on base of the Annona chalk.

Wickwire & Mitchell of New York City have assembled 5,000 acres 5 miles north of Carthage, including the Winny Mann Survey. Consideration included a cash payment of $500 and an obligation to begin a Glen Rose test before October 20, 1936.

Shelby County

Appearing to be a new pool opener, H. A. Stebbinger and others No. 1 Pickering Lumber Co., on the C. F. Henry Survey, 1 mile from Joaquin and a few miles west of the Louisiana line, blew out while coming out with a core between 5,018 and 5,025 feet, making considerable wet gas and mud. Estimates of the well flow ranged from 10,000,000 to 40,000,000 feet. After flowing wild for about one hour, the well was shut in but continued to leak about 10,000,000 feet of wet gas through leaky connections. Arrangements are now being made to set and cement 5-inch casing. Total depth is 5,110 feet in the Oolitic lime of the Glen Rose. This well checked high on top of the anhydrite as compared to four different tests in all directions from this location. It is located on the southwest side of the Sabine uplift, and should it prove the Glen Rose productive here much activity is expected to follow.

Lease and royalty prices have rapidly increased, and major companies are reported to be seeking protection here.

Oklahoma Fields

(Continued from Page 120)

and abandoned at 1,679 feet, total depth. Mechling No. 5 Luster, NE SW NE section 14-19-13, was dry and abandoned at total depth of 1,328 feet.

Grant County

Kay Oil Co. No. 4 Martin, NW SW SW section 23-27-3w, in the Deer Creek area, Grant County, was a rig.

Creek County

Two new operations were reported in Creek County. O. O. Owens No. 1 fee, NE NE SW section 30-14-8, an old well, was being deepened from 3,404 feet. Sinclair Prairie Oil Co. No. 1 Kermal, NE NE SE section 30-14-8, an old well, was deepening from 3,405 feet.

Coal County

Shell Petroleum Corp. No. 4-A Hill, C NW section 30-3n-10, is a location for a Cromwell sand test on the company's block in Coal County, northeast of Centrahoma.

Caddo County

Magnolia Petroleum Co. completed No. 5 Madrano, SE NW SW section 36-6-10w, in the Cement area, Caddo County, at 3,432 feet, total depth. It flowed 1,232 bbls. of oil in the first 24 hours. It had broken sandy lime at 3,374 feet.

Southwestern Oklahoma

Texas Co. No. 1 Bohanan, NE NW NW section 15-3s-5w, Stephens County, had sand at 1,437-60 feet, total depth, and pumped 62 bbls. of oil in 24 hours, completed. Raizen Brothers No. 11 Crosby, NW SW SW section 23-1s-5w, Stephens County, was dry and abandoned at 360 feet, total depth.

In Comanche County, Ashcraft & Palmer No. 6 School Land, NE SE NW section 20-2-10w, produced 1,500,000 feet of gas and was completed at 918 feet, total depth.

In Tillman County, Gulf Oil Corp. and others No. 1 McWilliams, NW SW SW section 15-3s-17w, wildcat, was dry and abandoned at 5,802 feet, total depth.

Carter Oil Co. No. 1 Kerns, SW NE SE section 21-3-5w, an old Grady County well being deepened, was drilling at 1,725 feet.

In Jackson County, Gulf Oil Corp. was starting three new tests. The No. 1 O'Neil, NW NW SW section 5-1s-19w, was a location; No. 3 Ellis, SE SW NE section 6-1s-19w, was rigging up; No. 4 Ellis, SW SE NE section 6-1s-19w, was rigging up rotary.

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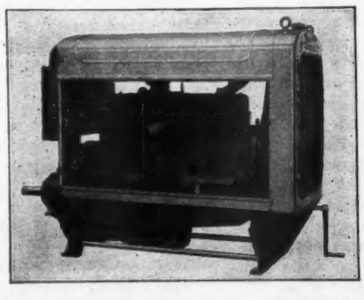

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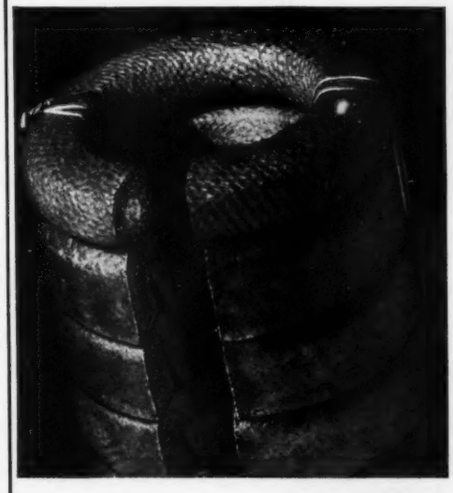

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East and East Central Texas

By
L. E. BREDBERG

EAST TEXAS' DEEPEST TEST IS ABANDONED IN TRAVIS PEAK

DALLAS, Tex., Aug. 16.—The deepest test structurally ever drilled in the East Texas district was abandoned this week by Pure Oil Co. in southern Rusk County. No. 1 Faulkner, in the William Elliott Survey, about 5 miles east of Mount Enterprise, was given up as failure after drilling to 7,799 feet, drilling 475 feet into the Travis Peak, topped at 7,324 feet. Elevation is 563 feet.

The company, on a block of several thousand acres, drilled in quest of Trinity sand production, found in the Glen Rose section of the Trinity in a well in the Cayuga field to the southwest. When rumors came out that Pure would drill the deep test, all acreage along the block and in the area brought premium prices.

Another deep test searching for Trinity sand production is Gulf Oil Corp.'s No. 1 Ross, in the Robert Erwin Survey, in the Camp Hill pool, eastern Anderson County. That test is drilling around 7,650 feet, having encountered no encouraging signs to date. Elevation is 487 feet. This test missed production in the three pay horizons from which other wells in this pool are producing and was previously abandoned after failing to get oil in the Woodbine, the deeper producing horizon of the three. After Tide Water and Texas Seaboard Oil Corp. found production in the Glen Rose, lower member of the Trinity, in their No. 21-A Wills, across the county in the northwest corner of Anderson, Gulf decided to carry one of their Camp Hill tests on down in search of the same production and this dry hole was picked as the one to deepen. How much deeper it is to be carried is not known, but it will no doubt the drilled through the Glen Rose.

Hopkins County

D. Hager, Luse & Russ No. 2 Worsham, southwest of their discovery well in the Alexander O. Wetmore Survey in Hopkins County, is nearing the Paluxy sand from which production was obtained in their discovery well 3 miles south of Sulphur Bluff, along the Fault plane in Hopkins County. This second test is now down 4,375 feet with first sand expected around 4,450 feet. The discovery was bottomed at 4,500 feet. The second test is checking slightly lower than the discovery, having an elevation of 429 feet. Georgetown lime was picked up at 3,615-18 feet.

The discovery well is pumping 22 to 23 bbls. of oil per hour, some of the oil being used to drill the second test and some of it going to the county for oiling roads. Carrying the second test deeper into the sand is contemplated by the owners in order to make a flowing well of it, which will give an idea as to the possibilities of the area. Carrying wells deeper into the sand at Talco proved effective, the discovery even making a better well when deepened.

Talco Pool

With 10 producing wells added to the Talco pool, northwest Titus and northeast Franklin County, and the daily allowable at 124 bbls. per day per well, it begins to look as if the producers will have to cut back production of their own wells voluntarily because of lack of demand for the low-gravity crude, at least until the Humble Pipe Line Co. completes its 8-inch line from Longview into the pool, which will not be until around the fore part of November, according to reports.

Abandonments

One test previously temporarily abandoned by Porter Brothers south of the discovery well, was given up this week at a total depth of 4,352 feet by Humble Oil & Refining Co., which took over the test and tried to make a producer of it. The Paluxy was logged from 4,188-4,352 feet and casing was cemented at 4,172 feet. A test due west of this failure will probably be plugged. Humble drilled this test on the Stevenson lands, in the I. P. Stern Survey, to 4,344 feet then plugged back to 4,291 feet to shut off bottom-hole water, redrilling to 4,296 feet. It showed nearly all salt water on swabbing test, and looks ready for abandonment also. Both tests are about one-half mile south and a little west of the discovery of the pool.

Extension

B. G. Byers and others No. 1 Lucy Blackburn, located in the J. W. McCullough Survey, about three-quarters of a mile southeast of production in the pool, was completed flowing 50 bbls. per hour at total depth of 4,301 feet, after picking up the Paluxy at 4,213 feet to total depth. Elevation is 327 feet. This extension proves up considerable more territory, marking the first eastern extension in several weeks.

Six locations were staked in the pool, with eight other locations or derricks up and 31 tests drilling, making it the most active pool in the district outside of the East Texas field. Lack of outlet is expected to curtail developments within the next few weeks, although a small skimming plant is now being erected in the pool which will take part of the oil and another skimming plant is contemplated by an operator who formerly had a small plant at Overton, in the East Texas field.

Southwest Extension

Humble Oil & Refining Co. No. 1 P. J. Dawson, in the B. H. Epperson Survey, north offset to a dry hole in the Franklin County part of the Talco pool, was gauged this week and showed good for 170 bbls. per day on pump at total depth of 4,330 feet. Elevation is 372 feet. This is about 2 miles southwest of the main part of production in Franklin County and 1¼ miles northwest of the nearest producer, Bateman and others, and opens considerable more territory on the west side of the field to production, proving the erratic characteristics of the Paluxy in the pool.

Wildcatting

The Atex Oil Co. of Athens abandoned its wildcat test 5 miles southwest of Chandler at a total depth of 4,920 feet. Elevation is 374 feet. It is located in the J. M. Arnest Survey, Henderson County. Austin chalk was logged at 4,320-4,538 feet.

After laying 4,000 feet of additional water line this week the Texfornia-Manning No. 1 Hocker and Hughes in the M.E.P.&P. Survey, southern Red River County, is preparing to drill the hole to the Paluxy in short order. It is now below 1,150 feet and running higher geologically than the nearest two previously drilled tests according to correlations made on the Pecan Gap chalk by the geologist watching the test. This test is about 7 miles northeast of the nearest production in the Talco pool to the southwest of Titus County.

The Stanolind Oil & Gas Co. has taken over a large number of leases along the fault line from Campbell in southern Hunt County, up through Commerce where it previously acquired a large block, and over into Delta and Hopkins Counties as far as Peerless and Posey, paying high prices in some instances for leases along the fault.

East Texas Field

Of the 54 completions reported in the East Texas field this week, one was dry and 14 were reported as pumpers with one a swabber. Two of the new wells also showed salt water, one making 40 per cent and the other 15 per cent brine. There were 37 locations staked for new tests. A new report compiled by the engineering department of the Railroad Commission will carry a list of pumping and salt water wells in the field, which will be exceptionally interesting due to many wells being forced on the pump which have heretofore been shut down with the operators taking their allowable from nearby flowing wells and not pumping or reporting the wells shut down. The list of salt water wells is also expected to show a considerable increase in the number of wells producing various amounts of brine. The federal forces in the field have been helping in checking up on the number of wells shut down or not pumping, which has caused an increase in the number of pumpers showing on production reports.

Miscellaneous Completions in East Texas

Anderson County

W. R. Adams No. 1 Lozica, total depth 5,337 feet, 55 bbls. in nine hours through one-eighth inch choke. Tide Water and others No. 1 A. Reeves, total depth 5,268 feet, 70 bbls. in 24 hours through one-eighth inch choke.

Franklin County

Humble Oil & Refining Co. No. 1 Dawson, total depth 4,330 feet, 170 bbls. in 24 hours on pump, elevation 372 feet. McAlester Fuel Oil Co. No. 8 Crawford, total depth 4,306 feet, 40 bbls. per hour, flowing.

Henderson County

Atex Oil Co. and others No. 1 Fair, dry and abandoned 4,920 feet, elevation 374 feet. Hunt Production Co. No. 1 G. W. Smith, total depth 4,098 feet, 171 bbls. in 24 hours through one-eighth inch choke.

Navarro County

Spandsco Oil & Refining Co. No. 1-A Kellam, 999-1,205 feet, 5 bbls. per day on pump. Thompson and Sitton No. 1-B Ramsey, abandoned 60 feet.

Red River County

Orr and others No. 1 Kurth Lumber Co., dry and abandoned 2,204 feet, elevation 411 feet.

Rusk County

Pure Oil Co. No. 1 W. H. Faulkner (Trinity sand test), dry and abandoned 7,799 feet, elevation 563 feet.

Titus County

B. G. Byer and others No. 1 Blackburn, total depth 4,301 feet, 50 bbls. per hour, elevation 327 feet. Halliburton, Inc. No. 1 Kelley, 4,345 feet, 6 bbls. per hour, 10 per cent water. Luse and Fosdick No. 2 Sullivan, 4,162-4,347 feet, 360 bbls. in 22 hours: No. 1 Nugent, 4,149-4,337 feet, 200 bbls. per day on pump. H. & H. Drilling Co. No. 1 Tidwell, 4,145-4,348 feet, 250 bbls. per day on pump. Nivia Oil Co. No. 2 Gray, 4,167-4,345 feet, 200 bbls. per day on pump. Paluxy Oil Co. No. 1 U. Shaw, 4,335 feet, 300 bbls. in 30 hours, swabbing and flowing. Sanders and Murchison No. 2 School Lot, 4,335 feet, 250 bbls. per day on pump. Humble Oil & Refining Co. No. 1 Sullivan (formerly Porter Brothers), dry and abandoned 4,352 feet.

East Texas Field

Gregg County

Amerada Petroleum Corp. No. 13 Killingsworth, 3,552-3,582 feet, 71 bbls. per hour; No. 6 McPherson, 3,513-38 feet, 76 bbls. per hour. Arkansas Fuel Oil Co. No. 10 Allison,

3,588-3,612 feet, 28 bbls. in 15 minutes. Atlantic Oil Producing Co. No. 13 Fishburn, 3,492-3,535 feet, 100 bbls. per hour. Empire Gas & Fuel Co. No. 27 Lee, 3,530-40 feet, 11 bbls. in 15 minutes. Gulf Oil Corp. No. 76 Judge, 3,498-3,517 feet, 16 bbls. in 15 minutes. Kewanee Oil Co. No. 6 Adams, 3,556-3,660 feet, 27 bbls. in 15 minutes. Shell Petroleum Corp. No. 13 Fishburn, 3,491-3,536 feet, 29 bbls. in 30 minutes. Stanolind Oil & Gas Co. No. 42-B McKinley, 3,598-3,642 feet, 8 bbls. per hour. Stanolind and others No. 15 Hays, 3,516-72 feet, 80 bbls. per hour. Sun Oil Co. No. 24-A Aiken, 3,508-72 feet, 65 bbls. per hour. Tide Water and others No. 24 Flewellen, 3,689-3,721 feet, 9 bbls. in 10 minutes. Trapp and others No. 3 Mosley, 3,405-3,500 feet, 20 bbls. in 20 minutes. Burma Oil Co. No. 5 Pentecost, 3,435-3,460 feet, 25 bbls. in eight hours on pump. Carroll No. 1 Whittington, 3,542-3,615 feet, 60 bbls. in 90 minutes. Delta Drilling Co. No. 2-B Clayborne, 3,700-03 feet, 30 bbls. in 30 minutes. Paul Doran No. 2 Jackson and Samples, 3,755-3,756 feet, 20 bbls. in six hours on pump. Gulf Oil Corp. No. 26 Muckelroy, 3,566-83 feet, 42 bbls. per hour; No. 13 Reeves, 3,560-71 feet, 65 bbls. per hour. Magnolia Petroleum Co. No. 3 Utzman, 3,460-72 feet, 10 bbls. in four hours on pump. Rozell Oil Co. No. 5-B Still, 3,485-3,505 feet, 20 bbls. in six hours on pump. N. E. Sanders No. 1 Still, 3,522-3,577 feet, 10 bbls. in four and one-half hours on pump. J. W. Russell No. 3 Lacy, 3,492-3,502 feet, 21 bbls. in four hours on pump; No. 4 Lacy, 3,491-3,535 feet, dry and abandoned. Sinclair Prairie Oil Co. No. 9-B King, 3,416-22 feet, 180 bbls. in two hours; No. 15-B King, 3,428-3,506 feet, 15 bbls. in eight hours on swab. Skar Oil Co. No. 3-L Clayborne, 3,677-83 feet, 20 bbls. per hour. Witco Oil & Gas Co. No. 5 Blackman, 3,639-40 feet, 35 bbls. in four hours on pump, 15 per cent water.

Rusk County

Gulf Oil Corp. No. 5-A Sexton, 3,668-3,738 feet, 20 bbls. in 40 minutes. Humble Oil & Refining Co. No. 17-A Laird, 3,619-54 feet, 95 bbls. per hour. Alex McCutchin No. 3 Kennedy, 3,578-3,620 feet, 35 bbls. in 10 hours. Shasta Oil Co. No. 5 Alexander, 3,622-33 feet, 30 bbls. per hour. Stewart Oil Co. No. 2 Ferguson, 3,481-3,521 feet, 20 bbls. per day on pump; No. 3 Sexton, 3,557 feet, 20 bbls. per day on pump. Humble Oil & Refining Co. No. 48 Blackwell, 3,630-31 feet, 44 bbls. per hour; No. 50 Blackwell, 3,664-65 feet, 49 bbls. per hour; No. 18 Pilgreen, 3,693-3,782 feet, 55 bbls. per hour. Ohio Oil Co. No. 15 Griffin, 3,600-76 feet, 50 bbls. per hour; No. 38 Moore, 3,625-3,701 feet, 74 bbls. in 15 minutes. Overton Refining Co. and others No. 7 Rollins, 3,662-63 feet, 75 bbls. in seven hours. Royal Petroleum Co. No. 7-A Wooley, 3,591-3,632 feet, 20 bbls. in eight hours on pump. Petroleum Marketing Co. No. 6-D Graham, 3,704-06 feet. 20 bbls. per hour. Stanolind Oil & Gas Co. No. 14 Milstead, 3,667-3,738 feet, 10 bbls. in 20 minutes. Sun Oil Co. No. 10 Selman, 3,649-55 feet, 60 bbls. per hour. Texas-Canadian Oil Co. No. 1 Kersh, 3,640-3,641 feet, 50 bbls. per day on pump, 40 per cent water. Wemack Oil Co. No. 7 Arnold, 3,661-75 feet, 20 bbls. per day on pump.

Smith County

Alex McCutchin No. 8 Marvis, 3,737-38 feet, 30 bbls. per hour. Sinclair Prairie Oil Co. No. 73-A Mayfield Co., 3,746-48 feet, 20 bbls. in 30 minutes.

Upshur County

Bell Oil, Inc. No. 4 Phillips, 3,746-58 feet, 40 bbls. per day on pump. Humble Oil & Refining Co. No. 29 Holland, 3,634-43 feet, 78 bbls. per hour. Mayhugben and others No. 7 Widner, 3,705-13 feet, 30 bbls. per day on pump. Sun Oil Co. No. 18 O'Byrne, 3,732-33 feet, 20 bbls. per hour. Texfield Oil Co. No. 5-B Shelton, 3,728-34 feet, 45 bbls. per hour. Tide Water and others No. 49-B Flewellen, 3,733-60 feet, 11 bbls. in 10 minutes.

Henry L. Doherty, head of Cities Service interests, is recuperating satisfactorily from a serious illness which had his family and associates worried for a time. He is undergoing treatment at Temple University Hospital in Philadelphia.

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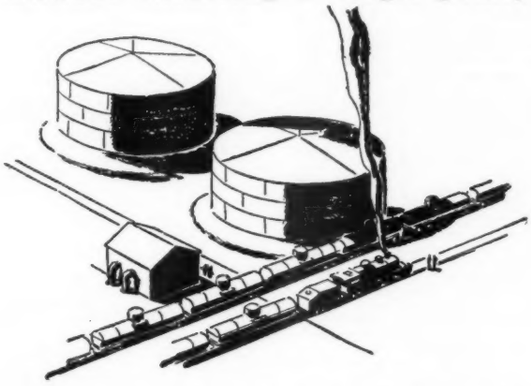

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Rocky Mountain Area

By
T. R. INGRAM

LARGE OIL AND GAS WELL IN MEDICINE BOW, WYO., FIELD

DENVER, Colo., Aug. 17.—Location for a Sundance test northwest of Thornburg dome, Moffat County, Colorado, was released by the Morapas Petroleum Co. The McElmo Oil Co. wildcat in Montezuma County again is attracting attention with 1,200 feet of oil in the hole. The Continental Oil Co. Buckingham test in Weld County was abandoned.

The Ohio Oil Co. and California Co. No. 2 Union Pacific, in the Big Medicine Bow field, Wyoming, made 93 bbls. of 60 gravity oil per hour with 16,000,000 feet of gas per day. Four new operations were reported in Wyoming.

Nebraska now has five wildcats getting under way.

One well was completed for 25 bbls. and one hole abandoned in the Red Mountain district, McKinley County, New Mexico.

A small gas well was completed in the Hardin field, Big Horn County, Montana. The Montana-Dakota Utilities Co. completed a 31,000,000-foot gasser at 1,852 feet in Fallon County. Three wells were completed, including one gas well, in Cut Bank. Best oil well was Dakota-Montana Oil Co. No 2 Matson for 300 bbls. R. C. Tarrant's wildcat in Pendroy district, Teton County, was abandoned. One small well was completed and two were abandoned in Kevin-Sunburst.

NEW MEXICO

The biggest New Mexico producer of the week was completed in the Eunice pool, Gulf Oil Corp. No. 1 Campbell, C SE SW section 7-21-36, which was drilled to 3,925 feet, total depth, and flowed 2,272 bbls. of oil naturally through tubing in 24 hours. Pay horizon was topped at 3,845 feet. The same company also completed No. 3 Houston, C SW SE section 7-21-36, which flowed 186 bbls. in three hours through tubing, to give it an initial 24-hour production of 1,488 bbls. Top of pay was 3,825 feet; total depth, 3,920 feet. Skelly Oil Co. and Humble Oil & Refining Co. No. 1 Adkins, C NE NW section 10-21-36, flowed 1,896 bbls. naturally in 24 hours and was completed at 3,887 feet, total depth. It topped pay at 3,760 feet. The fourth Eunice completion of the week was Devonian Oil Co. No. 5 State-Heasley, C NW NW section 5-21-36. It topped pay at 3,742 feet, was bottomed at 3,861 feet, and flowed 300 bbls. of oil naturally through one-half inch choke on tubing.

In the Monument area, Repollo Oil Co. No. 3-A Phillips, in section 31-19-37, was acidized and flowed 576 bbls. of oil in 12 hours through three-fourths inch tubing choke. It had pay at 3,825 feet; total depth, 3,900 feet. Amerada Petroleum Corp. No. 1 Phillips "A", SW SW NE section 31-19-37, had pay at 3,891-99 feet; total depth, 3,900 feet. After acidizing, it flowed 450 bbls. of oil in 24 hours through one-inch tubing choke. Tide Water Oil Co. No. 2-F State, C NE NW section 20-19-37, flowed 504 bbls. in 24 hours through three-fourths inch tubing choke, and was completed at 4,026 feet, total depth. Top of pay was 3,540 feet.

Humble Oil & Refining Co. No 1 W. B. Farrell, C SW SE section 22-22-37, in the Sims area, flowed 65 bbls. in 12 hours, 72 per cent water. Top of pay was 3,677 feet; total depth, 3,705 feet. In the nearby sand belt, same operator's No. 1 Boyd, C NW SE section 35-22-37, was dry and abandoned at 3,707 feet, where it had a hole full of sulfur water. Repollo Oil Co. No. 1 Stewart, section 10-25-37, in the Jal area, topped pay at 3,265 feet; total depth, 3,353 feet. It flowed 378 bbls. of oil in 12½ hours.

Monument Area

Anderson-Prichard Oil Corp. No. 2 Britt "A," C NE SW sec. 6-20-37. T.D. 2,558 ft.; W.O.C.

Gulf Oil Corp. No. 1 Ketter, C SW SE sec. 20-19-37. Derrick.

Texas Co. No. 3 State-Aggies, NE cor. sec. 20-20-37. T.D. 3,498 ft.; fishing.

Gulf Oil Corp. No. 5 Graham-State "C," C NW NE sec. 25-19-36. T.D. 3,820 ft.; drlg. plug.

Humble O. & R. Co. No. 4 State-Aggies, sec. 31-20-37. Cellar and pits.

Amerada Pet. Corp. No. 1 State "U," C SW NW sec. 32-19-37. Drlg. 2,940 ft.

Sun Oil Co. No. 2 State, C SE NE sec. 25-19-36. T.D. 3,843 ft.; W.O.C.

Ohio Oil Co. No. 1 Barber, C SW SW sec. 32-19-37. Drlg. 3,495 ft.

Repollo Oil Co. No. 1 Byrd, sec. 11-20-36. T.D. 3,829 ft.; W.O.C.

Repollo Oil Co. No. 2 Byrd, sec. 11-20-36. T.D. 280 ft.; set 15½-in. csg.

Repollo Oil Co. No. 1 Bordages, sec. 28-19-37. Loc.

Repollo Oil Co. No. 3-B Phillips, sec. 31-19-37. Loc.

Shell Pet. Corp. No. 1 State "G," SW cor. sec. 16-20-37. Drlg. 3,497 ft.

Shell Pet. Corp. No. 1-B Cooper, sec. 4-20-37. Loc.

Skelly Oil Co. No. 1 State "F," SE cor. sec. 17-20-37. Drlg. 3,444 ft.

Shell Pet. Corp. No. 3 State "B," C NE NW sec. 36-19-36. Drlg. 3,694 ft.

Texas Co. No. 1 J. W. Cooper, C NW NE sec. 5-20-37. T.D. 3,750 ft.; W.O.C.

Amerada Pet Corp. No. 2 State "T," C NE SW sec. 25-19-36. T.D. 3,820 ft.; W.O.C.

Amerada Pet. Corp. No. 2-A Phillips, sec. 31-19-37. Loc.

Amerada Pet. Corp. No. 2-L State, sec. 20-19-37. Drlg.

Amerada Pet. Corp. No. 2-R State, sec. 29-19-37. Loc.

Texas Co. No. 1 Weir, C SW NW sec. 25-19-36. T.D. 3,990 ft.; bailing.

Amerada Pet. Corp. No. 1 State "V," NE cor. sec. 36-19-36. Drlg. 3,612 ft.

Continental Oil Co. No. 3-A-3 Reed, C NE SE sec. 3-20-36. Drlg. 3,722 ft.

Ollwell Drlg. Co. No. 1 Klingsmith, C SE SE sec. 20-19-37. T.D. 3,984 ft.; shut in.

Texas Co. No. 3 Mattern, C SE SW sec. 20-19-37. Drlg. 2,950 ft.

Ohio Oil Co. No. 2 Barber, C NE NW sec. 5-20-37. Drlg. 3,417 ft.

Gulf Oil Corp. No. 2 Phillips, C NE NE sec. 31-19-37. Drlg. 3,313 ft.

Tide Water Oil Co. No. 2 State "H," C NE SW sec. 32-19-37. Drlg. 2,883 ft.

Gulf Oil Corp. No. 3 Mathews, C SE SE sec. 6-20-37. Drlg. 3,665 ft.

Tide Water Oil Co. No. 1 Anderson, C NW SE sec. 8-20-37. Drlg. 2,000 ft.

Tide Water Oil Co. No. 1 Laughlin, C SE NW sec. 4-20-37. R.U.R.

Gulf Oil Corp. No. 6 Graham-State "C," C SW SE sec. 25-19-36. T.D. 3,810 ft.; W.O.C.

Gulf Oil Corp. No. 1 L. M. Martin, C NE SE sec. 25-19-36. T.D. 3,786 ft.; S.D.

Amerada Pet. Corp. No. 6 Weir, C NE NW sec. 35-19-36. Drlg. 3,389 ft.

Amerada Pet. Corp. No. 2 State "V," C NW NE sec. 36-19-36. Drlg. 3,168 ft.

Continental Oil Corp. No. 1-A-11 Sanderson Permit, C NE SE sec. 11-20-36. Drlg. 2,845 ft.

Amerada Pet. Corp. No. 2 State "U," C NW NW sec. 32-19-37. T.D. 2,505 ft.; W.O.C.

Amerada Pet. Corp. No. 1 Haney, C SW SW sec. 33-19-37. Rig.

Humble O. & R. Co. No. 1 Laughlin, C SW NE sec. 4-20-37. Drlg. 1,800 ft.

Texas Co. No. 4 Phillips, C SE NW sec. 6-20-37. Drlg. 2,215 ft.

Eunice Area

Empire G. & F. Co. No. 1 State "D," C SE NE sec. 32-21-36, ⅝ mi. N part of No. 157 lse. T.D. 3,941 ft.; preparing to tube and pump.

Continental Oil Co. No. 11-B-4 Meyer, C SE SE sec. 4-21-36. T.D. 3,800 ft.; to drill plug.

Samedan Oil Co. No. 1 Marshall, C SW NW sec. 12-21-36. Drlg. 3,827 ft.

Devonian Oil Co. No. 6 State-Heasley, C NE SW sec. 5-21-36. Loc.

Gulf Oil Corp. No. 2 Collins, C NE NW sec. 14-21-36. T.D. 3,700 ft.; to drill plug.

Gulf Oil Corp. No. 2 Graham-State "E," C NW SE sec. 6-21-36. Rigging up rotary.

Gulf Oil Corp. No. 1 Orcutt "C," C SE SE sec. 6-21-36. Derrick.

Humble O. & R. Co. No. 4 Knox, C NW NE sec. 10-21-36. T.D. 1,462 ft.; W.O.C.

Humble O. & R. Co. No. 2 State-Aggies, C SW SW sec 31-20-37. Moving in material.

Atlantic Oil Prod. Co. No. 2 State "K," C NE SW sec. 6-21-36. Drlg. 3,820 ft.

Gulf Oil Corp. No. 3 Collins, C SW NE sec. 14-21-36. Drlg.

Gulf Oil Corp. No. 3 Bell-State "C," C NE NW sec. 15-21-36. Moving in rotary.

Gulf Oil Corp. No. 8 Arnott-Ramsey "C," C SW SE sec. 21-21-36. T.D. 3,880 ft.; acidized and shot.

Continental Oil Co. No. 2-B-14 Lockhart, C NW NW sec. 14-21-36. T.D. 3,695 ft.; preparing to drill plug.

Gulf Oil Corp. No. 5 Orcutt, C NW NW sec. 5-21-36. Drlg. 930 ft.

Shell Pet. Corp. No. 2 State "E," C NW NE sec. 6-21-36. T.D. 3,880 ft.; testing.

Atlantic Oil Prod. Co. No. 2 State "L," C SE NW sec. 22-21-36. T.D. 3,830 ft.; W.O.C.

Gulf Oil Corp. No. 9 Arnott-Ramsey "C," C NE NE sec. 21-21-36. T.D. 3,800 ft.; W.O.C.

Landreth Prod. Co. No. 1 State "D," C NW NW sec. 22-21-36. Drlg. 3,817 ft.

Landreth Prod. Co. No. 2-D State, sec. 22-21-36. Loc.

Mid-Continent Pet. Corp. No. 2 Marshall, C NW NW sec. 11-21-36. Bldg. derrick.

Continental Oil Co. No. 2-D-15 State, C NW NE sec. 15-21-36. Drlg. 3,108 ft.

Empire O. & R. Co. No. 2 Closson "A," C NE SE sec. 6-22-36. Drlg. 3,370 ft.

Continental Oil Co. No. 13-B-4 Meyer, C NW NE sec. 4-21-36. Drlg. 3,659 ft.

Continental Oil Co. No. 14-B-4 Meyer, C SW SE sec. 4-21-36. Drlg. 3,196 ft.

Gulf Oil Corp. No. 1 H. Leonard, C NW SW sec. 22-21-36. Drlg. 3,552 ft.

Shell Pet. Corp. No. 3 State "E," C SE NW sec. 6-21-36. Drlg. 2,575 ft.

Continental Oil Co. No. 1-D-11 State, C NW SW sec. 11-21-36. Drlg. 1,735 ft.

Continental Oil Co. No. 3-B-14 Lockhart, NW NE NE sec. 14-21-36. Drlg. 2,055 ft.

Continental Oil Co. No. 3-D-15 State, C NE NE sec. 15-21-36. Drlg. 2,555 ft.

Sims Area

Skelly Oil Co. No. 1 Ella Simms, C NW SE sec. 3-23-37. Drlg. 3,585 ft.; flowed 605 bbls. in 24 hours while drilling.

Penrose and Rowan No. 3 Cary, C SE NW sec. 22-22-37. T.D. 1,305 ft.; waiting on tools.

Continental Oil Co. No. 1-A-15 Elliott, SE SE SE sec. 15-22-37. Cellar and pits.

Continental Oil Co. No. 1-A-21 Elliott, C SE SE sec. 21-22-7. T.D. 1,130 ft.; drlg. plug.

Gulf Oil Corp. No. 1 F. C. King, C SW NW sec. 5-23-37. T.D. 3,788 ft.; csg. parted.

Penrose and Rowan No. 4 Cary, C SW NW sec. 22-22-37. T.D. 3,600 ft.; flowed 150 bbls. in 24 hrs.

Samedan Oil Co. No. 1 Hughes, C NE SW sec. 4-23-37. Drlg. 1,165 ft.

Ohio Oil Co. No. 1 Walden, C NE NE sec. 21-22-37. Drlg. 1,210 ft.

Skelly Oil Co. No. 1 Ella Simms "A," C SW SE sec. 3-23-37. Drlg. 3,160 ft.

W. H. Street et al No. 1 Wood, C W½ SE NE sec. 22-22-37. Bldg. derrick.

Hobbs Area

National Securities Oil Corp. No. 1 Linam, NE SE SW sec. 33-18-37; wildcat. Old well P.B. from 4,238 to 4,228 ft.; swbd. sulfur wtr.; no oil; S.D. for orders.

Cooper Area

Southern Oil Corp. No. 1 Gates, C SW NW sec. 23-24-36. T.D. 3,497 ft.; flowed 82 bbls. oil in 24 hrs., 200 bbls. water per hour; P.B. to 3,445 ft.; swabbed all water below packer at 3,492 ft.; P.B. 3,445 ft.; R.U.S.T.

Southern Oil Corp. No. 2-A-15 Vaughan, C NW SE sec. 15-24-36. Drlg. 1,864 ft.

Lea County—Miscellaneous

Landreth Prod. Co. No. 1 J. W. Grizzell, C SE SW sec. 5-22-37. T.D. 3,780 ft.; flowed 40 bbls. in 1½ hrs.; swbg. and testing.

Rowan et al No. 1 Mattern, C SW SE sec. 7-22-37. T.D. 3,746 ft.; flowed 5 bbls. fluid per hour, 95 per cent wtr.; testing.

C. & G. Oil Co. No. 1 E. Weir, C NE NE sec. 14-20-37. Wildcat; T.D. 4,075 ft.; flowed 20 bbls. oil and 160 bbls. wtr. in 24 hrs.; testing.

Gulf Oil Corp. No. 1 L. M. Buffington, C NW SW sec. 13-25-37. T.D. 3,331 ft.; killing gas.

Sun Oil Co. No. 1 Lanehart, C SE SE sec. 20-25-37. T.D. 2,942 ft.; W.O.C.

Skelly Oil Co. No. 1 Stuart, C NE NW sec. 15-25-37. T.D. 3,416 ft.; drlg. on bridge at 2,514 ft.

Williams & Cockburn No. 3 Miller, C SW SW sec. 23-17-32. Drlg. 2,275 ft.

Texas Co. No. 1 E. Fanning, C SE NE sec. 4-24-7. T.D. 3,701 ft.; cleaning out.

Jal Natural Gas Co. No. 1 Bates, C NW SW sec. 20-25-37. T.D. 2,720 ft.; S.D. for rotary.

Culberson & Irwin No. 1 Eaves, C SW NW sec. 18-21-33. Drlg. 3,725 ft.

Argo Royalty Co. No. 1 Lanehart, SW SE NE sec. 21-25-37. T.D. 950 ft.; S.D. for rotary.

Magnolia Pet. Co. No. 1 Scharbauer-Edison, C NW NE sec. 29-16-35. Drlg. 2,810 ft.

Magnolia Pet. Co. No. 2 O. E. Carson, C NW NW sec. 33-21-37. Drlg. 250 ft.

Plains Prod. Co. No. 1 Knight, C NE SE sec. 21-24-37. Drlg. 2,675 ft.

Plains Prod. Co. and Culberson & Irwin No. 2 Knight, C NE SW sec. 14-24-32. Cellar and pits.

Plains Prod. Co. and Culberson & Irwin No. 1 Williams, C SW NE sec. 34-24-37. Drlg. 3,115 ft.

Republic Prod. Co. No. 2 Crosby, NW NW SW sec. 28-25-37. Drlg. 1,260 ft.

Stanolind O. & G. Co. No. 1 Langley, sec. 15-25-37. Loc.

Ollwell Drlg. Co. et al No. 1 L. L. Clardy, C SE SE sec. 13-16-36. Wildcat; drlg. 3,803 ft.

Emperor Oil Co. No. 1 State, C SW SW sec. 5-21-35. T.D. 415 ft.; R.U.R.

Humble O. & R. Co. No. 3 State-Aggies, C NW NW sec. 31-30-37. Wildcat; drlg. 3,829 ft.

Continental Oil Co. No. 3-A-24 McCallister, C SE SE sec. 24-26-36. Drlg. 2,555 ft.

Gulf Oil Corp. No. 1 Carr, C NW SW sec. 3-24-37. T.D. 3,886 ft.; P.B. 3,625 ft.

Eddy County

Etz Bros. No. 2 State, C NW SW NE sec. 16-17-30. Drlg. 3,276 ft.; flowed est. 100 bbls. dly. after second acidization; testing.

Etz Bros. No. 3 State, sec. 16-17-30. Spudded.

Repollo Oil Co. No. 1-C McIntyre, sec. 21-17-30. T.D. 3,190 ft.; swbd. 72 bbls. of oil; ran swab one time.

Tignor, Etz & Keys No. 4 Keys "A," C SW SE sec. 10-17-28. Drlg. 2,225 ft.

Grayburg Oil Co. No. 7 Burch, C NW NE sec. 19-17-30. Drlg. 2,881 ft.

Carper et al No. 1 Gissler "B," NW NE NW sec. 23-17-30. Drlg. 2,695 ft.

Hammond et al No. 1 State, SW SE SW sec. 15-17-28. Drlg. 65 ft.; S.D.O.

Pecos Valley Gas Co. No. 1 Andrews-State, C SW SW sec. 2-17-28. Drlg. 1,325 ft.

Republic Prod. Co. No. 6 Russell, SW NE NW sec. 18-17-31. Drlg. 200 ft.

Flynn, Welch & Yates No. 74 State, C S½ NE SW sec. 27-18-28. Drlg. 915 ft.

D. & B. Oil Co. No. 2 Berry, NW SE NW sec. 20-17-30. Drlg. 1,695 ft.

William Dooley No. 1 Hatchett, NE SW NE sec. 11-20-26. Wildcat; T.D. 250 ft.; S.D. for rotary.

Harding County

Kahay No. 1 Dae Daca, C sec. 19-20n-31e. T.D. 1,511 ft.; setting 5 3/16-in. csg.

Clyde B. Neill No. 1 Foster, C NW SW sec. 27-21-30. Drlg. 700 ft.

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De Baca County

Mid-Continent Engineering Corp. No. 1 State, C NW SE sec. 27-4n-22e. T.D. 1,051 ft. in broken lime; S.D.

Chaves County

Comanche Drlg. Co. No. 2 Sloop & Purcell, C NE NE sec. 15-11-26. T.D. 1,283 ft.; acidized; flowed 450 bbls. fluid dly.; reacidized; testing.

McKinley County

Claude Walker No. 2 fee, sec. 20-20n-9w. Drlg. at 100 ft.

Roosevelt County

Wirt Franklin and Flynn, Welch & Yates No. 1 Catts, C NW NW sec. 28-3n-30e. Moving in material.

San Juan County

Continental Oil Co. No. 55 Rattlesnake, NE SE NE sec. 2-29n-19w. Spudded.

NORTHWEST NEW MEXICO

Bernalillo County

Norine Realty Co., Inc., No. 2 Gallegas grant, SE NW NW sec. 19-11n-4e. Drlg. 1,850 ft.; prep. to run 8¼-in.

Guadalupe County

Anton Chico Dev. Co. No. 2 fee, NW NE SW sec. 20-9n-17e. S.D. 1,000 ft.

McKinley County

William Forth No. 4 fee, NE NW NE section 29-20n-9w, in the Red Mountain district, was completed for 25 bbls. per day in sand at 462-75 feet. Claude Walker No. 2 Santa Fe, SW SE SE section 20-20n-9w, was dry and abandoned at 540 feet.

Al Gibbons No. 2 fee, NW SW NE sec. 28-20n-9w. Drlg. 165 ft.; (first report).
Claude Walker No. 3 fee, SW SW SE sec. 20-20n-9w. Drlg. 150 ft.; (first report).
S. Dysart et al No. 1 Bouton, CEL NW NE sec. 14-14n-10w. T.D. 1,490 ft.; C.O.
Foster & Clark No. 1 R. R. land, NE NE NW sec. 29-20n-9w. Drlg. 175 ft. in new hole.
Red Mountain O. & G. Co. No. 1 State, NE NE SW sec. 21-20n-9w. Drlg. 175 ft.

San Juan County

Atchison & Galloway No. 1 Patd., C SE SE sec. 19-29n-11w. Drlg. sh. 300 ft.
Continental Oil Co. No. 57 Tribal, NW NE NE sec. 2-29n-19w. Loc.; (first report).
W. L. Hair No. 1 Hair, NE NW NE sec. 23-29n-11w. S.D. 900 ft.
Kutz Canon O. & G. Co. No. 1 Day, SW SW SW sec. 20-28-10w. T.D. 4,400 ft.; pulled 4¾-in.; C.O. 3,900 ft.

Torrance County

45 Pet. Co. No. 1 Greenfield, C NW SW sec. 17-9-8e. S.D. 2,045 ft.; to finance.

July pipe line runs from Lea County pools were as follows:

	Bbls.
Hobbs	706,602
Cooper	227,675
Eunice	670,943
Lea	29,349
North Lea	2,358
Jal	96,733
Monument	380,155
Total	2,113,815

COLORADO

Adams County

Oklahoma Oil Co. No. 1 Baxter, C SW sec. 2-3s-66. Drlg. 3,067 ft. in sdy. sh.; good S.G. with scum of oil on pit in sd. at 2,640-46 ft.
Glenridge Oil Corp. No. 1 Hills, SE SE SE sec. 27-3s-64w. Cmtd. caves to bottom at 4,262 ft.; W.O. 6¼-in.

Archuleta County

The William E. Hughes Estate No. 8 Gramps, on unsurveyed land but approximately in section 24-33n-2e, was abandoned at an unnamed depth. Drilling report below gives only such details as are released by the operator. The operation is on a Mexican land grant owned in fee by the estate.

The Oil City Petroleum Co. No. 1-A Garnett, NE NW SW section 25-33n-2e, Price district, which was drilled last year to 1,515 feet, with top of the Dakota series at 1,415 feet, has plugged off bottom water and lifted the 6¼-inch above oil show at 970 feet. When pipe was raised oil rose 800 feet. It has not been tested. It was the show of oil at this horizon which resulted in the present development in that area.

William E. Hughes Est. No. 9 Gramps, sec. 24-33n-2e (unsurveyed). T.D. 950 ft.; capped.

William E. Hughes Est. No. 10 Gramps, sec. 24-33n-2e. Spd. July 22; drlg. 950 ft.; good S.O. (first report).
William E. Hughes Est. No. 11 Gramps, NE of No. 10. Spdg. (first report).
Carl D. Linstrom No. 1 Crowley, SE SE SE sec. 3-22n-2e. R.U.
Maryott Drlg. Co. No. 1 Hollywood, SE SE SE sec. 15-34n-1w. Spd. June 24; test on 3,000-ac. blk in Catchpole district.
Oil City Pet. Co. No. 1-A Garrett, NW NE NW sec. 25-33n-2e. P.B. to oil show at 970 ft.; 800 ft. of oil.
Oil City Pet. Co. and Archuleta O. & G. Co. No. 1 Reeder, Lot 5 (SW SE SW), sec. 24-33n-2e. T.D. 1,183 ft. in sd.; 250 ft. of oil; will run 6¼-in.
H. L. Kendrick No. 1 Crowley (unsurveyed), sec. 2-32-1. Drlg. 1,167 ft.; will U.R. 6¼-in. for W.S.O.

Baca County

Paul R. Robb Pet. Corp. No. 1 Lovett, NW NW NW sec. 24-32s-48w. S.D. 2,790 ft.

Boulder County

Boulder Prod. Dev. Co. No. 2 Maxwell, NW NW NE sec. 24-1n-71. Drlg. 710 ft.

Costilla County

L. R. Lane No. 2, sec. 25-31s-74. S.D. 500 ft.

Jackson County

Colorado Oil Ref. Co. No. 1 North Park Coal Co., NW NW sec. 18-9n-78w. T.D. 2,390 ft.; W.O. 8¼-in.

Jefferson County

Ruby Hill O. & G. Co. No. 1 Braden, SE SE SE sec. 24-4s-6w. S.D. 4,475 ft.; to finance.

Larimer County

Continental Oil Co. No. 8 Buckeye-U. P., C NE SW section 1-10s-68. Drlg. 4,137 ft. sh. and bentonite.

La Plata County

McGarr Pet. Co. No. 1 Pinton-Mesa, CSL NE NE sec. 34-35n-12w. S.D. 3,500 ft. for 6¼-in.

Las Animas County

Mountain States Oil Corp. No. 1 Nikola, C NE SE sec. 10-34n-63w. S.D. 1,813 ft.

Lincoln County

Consolidated Smelting & Metals Co. No. 1 Hancock, NE NE SW sec. 7-17s-62. T.D. 2,050 ft.; fsg. bailer; bottomed in sd. in Morrison, 1,000 ft. wtr.; S.G. at 1,904 ft. forced bailer 75 ft. up from bottom where it stuck.

Moffat County

The Morapas Petroleum Co. (Burton Cole and others) has let contract to Fry & Orr, drilling contractors of Fort Collins, Colo., for a test to the Sundance at 3,250 feet on the northwest side of the Thornburg (Morapas) dome in its No. 1 N. E. Cole, SW SE section 1-3n-92. The location is 3 miles to the northwest of the nearest of the three gas wells of the Continental Oil Co. Two miles to the east and a little south, the Shaffer Oil & Refining Co. No. 1 Voetzel, SW SE section 8-3n-91, was drilled to 2,578 feet in 1926. It had the Dakota at 2,180 feet and the Lakota at 2,370 feet.

Continental Oil Co. No. 1 Henderson, SW SW SW sec. 16-3n-91. R.U.R.
Mountain Fuel Supply Co. No. 1 Allen, NE SW SE sec. 32-12n-97w. Cg. 2,595 ft. in var. sh.
Mountain Fuel Supply Co. No. 1 Kuykendall, NE NE SE sec. 22-12n-100. T.D. 2,536 ft.; U.R. 4¾-in.

Morgan County

Swisher et al No. 1 Lunt, 92 ft. W of E line and 360 ft. N of S line, sec. 3-4n-60. Resuming at 1,460 ft.

Montezuma County

The McElmo Oil Co. No. 1 West, NE NW NW section 31-36n-17w, McElmo Canon district, a wildcat which has been drilling intermittently since 1932 and which attracted considerable attention in the spring of 1935 when it had a show of oil at 3,130 feet which filled the hole, is bottomed at 3,960 feet. At this depth it had a show for 1 bbl. of oil a day. It was acidized with 600 gallons and allowed to stand for some time. An attempt was made to swab the hole and the oil made a flow over the top and then settled to a level of 1,200 feet off bottom. A reliable report says that the hole was bailed for a full day and that the column of oil could not be lowered. However, the bailer was inadequate for a satisfactory test. No reliable estimate can

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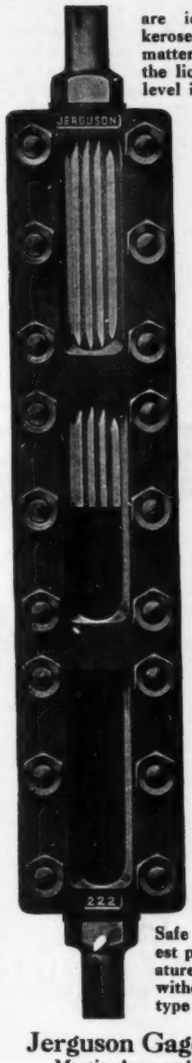

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be made as to what the well will do, and it will be necessary to run a string of 4½-inch pipe before a test can be made. The hole is bottomed in the upper Pennsylvanian. The oil at 3,130 feet tested 44.1 gravity. The location is approximately 3 miles southeast of a test drilled in 1922 by the Midwest Oil Co. which had a show of oil at 1,740 feet and 100 feet of oil at 1,890 feet. These were supposed to be in the red beds. At 4,217 feet it had 4,000,000 feet of gas and a show of oil at 4,150 feet.

McElmo Oil Co. No. 1 West, NE NW NE sec. 21-26n-17w. T.D. 2,960 ft.; stdg. with 1,200 ft. of oil in hole after acidizing.

Park County

South Park Oil Co. No. 1 Lemar, NE NE SE sec. 34-11s-75. Drlg. 350 ft.
South Park Oil Co. No. 1 LeBert, NE NE NW sec. 21-11n-75w. S.D. temp. 705 ft.
South Park Oil Co. No. 1 State, SE NE SW sec. 16-11s-75w. Drlg. 4,710 ft.; carrying 4½-in. at 4,685 ft.

Routt County

Mid-Colo Pet. Co. No. 1 Omoholt, NE SE SE sec. 29-4n-87w. S.D. 2,910 ft.; renewing leases before drlg. into Sundance.

Washington County

I.T.I.O.-Carter-Foster Minerals Corp. No. 1 Vorce, C NE NE sec. 28-1s-49. T.D. 5,553 ft.; washing over D.P. stuck at about 5,000 ft.

Weld County

The Continental Oil Co. is abandoning its No. 1 State Bank of Trenton, C SW NE section 21-8n-59, Buckingham district, at a total depth of 6,965 feet. It topped the Muddy at 6,605 feet and had a show of gas and water in the base at 6,627 feet. The top of the Dakota was at 6,695 feet and water was encountered at 6,705 feet. The top of the Lakota was at 6,944 feet with water from 6,960 feet to bottom. The elevation is 4,815 feet. The location is 3 miles west of the No. 1 Anthes, elevation 4,829 feet; Muddy at 6,523-38 feet; top of Dakota at 6,627 feet and total depth 6,658 feet.

Continental Oil Co. No. 2 Briggs, C NE SW sec. 13-6n-61. M.I. rot.

Yuma County

Indian Territory Ill. Oil Co. No. 1 Strangways, C NW SW sec. 21-2s-43w. T.D. 5,050 ft.; washing over D.P. stuck at 3,200 ft.

WYOMING

Albany County

Geo. D. Parkinson et al No. 1 George & Hunt, NW NE SE sec. 5-17-75w. Drlg. 1,065 ft.
California Co. No. 2 Wilson, SW SW SW sec. 18-17-76. Drlg. 3,169 ft.
Ohio Oil Co. No. 1 Styles, SW cor. sec. 12-15n-75. Drlg. 2,086 ft. in red beds; Sundance at 1,804 ft. dry.
Hal Blakeman No. 1 Chappie, C NE NW sec. 33-21n-76. Drlg. 150 ft.; cmtd. 2 joints 8¼-in.

Big Horn County

The Montana-Wyoming Oil Co. No. 1 Allen, Lot 52, section 32-56-97, Garland field (Stock Oil Co.) which has been out of control since January 19, blowing 60,000,000 feet of gas a day at a total depth of 3,838 feet, is beginning to show signs of yielding to the efforts to kill it. Water is being pumped into the hole through the Dakota sand and the top of the Embar from two nearby wells. First water was forced into the Dakota two weeks ago at a pressure of 1,500 pounds. Water with some shale is now beginning to show in the gasser.

J. W. Bales No. 1 Parker, SW SW sec. 23-4-9. S.D. 726 ft.; indef.
Montana-Wyoming Oil Co. No. 1-X Allen, Lot 52, sec. 18-56n-87w. Pmpg. wtr. through sd., starting at 1,500 lbs. pressure, to No. 1 Allen, still out of control.
Ohio Oil Co. No. 1 Irene Lindsay, C NW SE sec. 23-56n-97. Cmtd. 12½-in. at 415 ft., 225 sacks.
Ohio Oil Co. No. 2 State, NE cor. Lot 38, sec. 36-46n-97. R.U.
Ohio Oil Co. No. 1 Orson Vail, SW NW NE sec. 23-56n-97w. T.D. 5,038 ft.; milling on iron.
Ohio Oil Co. No. 1 Robert Till, C SE SW sec. 24-56n-87w. T.D. 5,417 ft.; moving off rot. and rg. pump to test.
Peay Oil Co. No. 1 Denio, Tr., 43-C, sec. 15-55n-87w. T.D. 3,890 ft.; prep. to run 6¼-in.
Peter Evanoff et al No. 1 McAllister, NW NE SE sec. 3-55n-87. T.D. 2,720 ft.; U.R. 6¼-in. at 2,649 ft.
Stock Oil Co. No. 1 Yates, CSL SW NE sec. 33-56n-87w. Crd. 200 ft. of good sat. to 4,160 ft.; cmtd. 7-in. at 3,855 ft. in top Madison L.

Campbell County

G. J. Sherin et al No. 1 Rodes, NE SE SW sec. 24-49n-74. Drlg. 191 ft.

Carbon County

The Ohio Oil Co. No. 2 Union Pacific, C NE NE section 35-21-79, Big Medicine Bow, joint with the California Co., was completed at 5,596 feet in the upper Sundance at 5,508-96 feet and flowed 93 bbls. an hour through the 2½-inch tubing with 16,000,000 feet of gas a day. The oil tested 60 gravity, Beaume scale, 4 degrees lower than in No. 1 Kyle, the discovery well. It is a west offset to the same companies' No. 2 State, which made 80 bbls. an hour at 5,505 feet, total depth, after plugging back from the second Sundance which had water. The elevation of No. 2 Union Pacific is 7,206 feet.

Medicine Bow Oil Co. No. 1 Hintze-Govt., C NE SE sec. 18-22n-78. Drlg. 310 ft.
General Pet. Corp. No. 1 Union Pacific, SW NW sec. 19-83w. Drlg. 3,897 ft.
Ohio Oil Co. No. 7 Diamond Cattle, SW SW NW sec. 35-20n-78w. Crg. 3,200 ft.
Ohio Oil Co. and California Co. No. 3 Union Pacific, C NE SE sec. 23-21n-79w. T.D. 5,557 ft.; 7-in. at 5,525 ft.; W.O.C.
Ohio Oil Co. No. 2 Dixon, SE NE NE sec. 34-20n-78w. R.U. to deepen old well from 3,094 ft. to Sundance.
Sinclair-Wyoming Oil Co. No. 10 Govt., SW SE NW sec. 7-26-89w. Drlg. 3,685 ft.
Union Oil Co. of California and Mutual Oil Synd. No. 1 Union Pacific, 1,890 ft. from E line and 1,320 ft. from S line, sec. 1-18-78w. S.D.O. 5,464 ft.

Converse County

Chadron-Osage Oil Co. No. 1 State, SW SW sec. 16-32n-69w. T.D. 3,050 ft.; S.O. through H.F.W. at 2,800 ft.; 10-in. cmtd. 2,675 ft.; M.I. 8¼-in.
J. A. Olson No. 1 Reese, C NE SE sec. 10-32n-65w. M.I.M.

Fremont County

C. E. Nelson No. 1 Enos, Lot 7, sec. 27-3n-1w. Drlg. 836 ft.; tested at 625 ft. made 18 bbls. per day.
Tropic Oil Co. No. 1 Govt., C SE SW sec. 34-27n-90w. T.D. 2,550 ft.; rng. 4½-in. Sinclair-Wyoming Oil Co. No. 2-C Muskrat, NE SW SW sec. 1-33n-92w. Drlg. 5,250 ft. in sh.

Hot Springs County

The Mountain States Power Co. has gone back into the Mexico-Wyoming Oil Co. well on Little Grass Creek and will deepen it. This well was the discovery, coming in for 40,000,000 feet of gas at 2,901 feet, total depth, a number of years ago. The gas was piped to Thermopolis. The well recently went to water.

The Empire State Oil Co. is moving in materials for a wildcat in section 33-44n-93, near the Kirby district. The objective is the Frontier series at 1,800 feet.

Mountain States Power Co. No. 1 Mexico-Wyo., SW SW NW sec. 11-46n-99. C.W. D.D.; old T.D. 2,901 ft.; C.O. to 2,805 ft.; no show of gas; fshg. for tools.
Empire State Oil Co. No. 1 Larson, sec. 33-44n-93. M.I.M. (first report).
Fruedenthal No. 6, SE SE NE sec. 21-43-92. S.O. at 401 ft.; est. 8 bbls.; will run 5 3/16-in. and test.
Ohio Oil Co. No. 73 Mill Iron Cattle Co., NE SW SE sec. 19-4n-98w. Crd. to 3,897 ft.; bottom of sat. 3,891 ft.; will core to 3,902 ft., run tubing and test.

Laramie County

Amerada Pet. Corp. No. 1 Morton, C SW SW sec. 13-13n-68. Rigged and ready to spud.

Lincoln County

Senrab Oil Corp. No. 3 Govt., CSL SE NW sec. 10-26n-113w. S.D. 1,020 ft.

Niobrara County

Continental Oil Co. No. 1 Rohlff, 200 ft. N of S line and 660 ft. W of E line, SE NW sec. 32-36n-65. Drlg. 1,100 ft.
Continental Oil Co. No. 7 Rohlff, C NE SW sec. 23-36-65. Drlg. 1,450 ft.
Holly Dev. Co. No. 1 Novick, NE SE SW sec. 6-35n-65. M.I.M. (first report).
Continental Oil Co. No. 4-A Schuricht, C NE SE sec. 6-35n-65. Drlg. 336 ft.
Lewis Gokel No. 1, NE SE NW sec. 31-35n-62w. Drlg. 880 ft. in Morrison.
MacKinnie Oil & Drlg. Co. No. 1 Thompson, NE NW NE sec. 7-35n-65w. Drlg. 3,826 ft.; top Sundance 3,826 ft.
Ohio Oil Co. No. 3 Richards & Comstock, 200 ft. S of N and 660 ft. W of E, NE SW sec. 32-36n-65w. R.U.R.
Ohio Oil Co. No. 5 Converse Sheep, C SE SW sec. 32-36n-65w. S.D. below 4,600 ft.; believed to have cored top of Tensleep.
Ohio Oil Co. No. 5 Putnam, C NW SW sec. 33-36-65w. T.D. 3,968 ft.; 5 ft. in red beds; cmtd. 7-in. 3,889 ft.; drlg. plg.
Riggs Oil Co. No. 2 Spaugh, C NW NE sec. 5-33n-65. Drlg. 251 ft.
Chester Oil Co. No. 1 fee, NE NE NE sec. 14-39n-61. Drlg. 800 ft.; cmtd. 8¼-in. at 778 ft. on top Dakota.
S. & H. Dev. Co. No. 11-A Olinger, SW NE sec. 1-36n-63. S.D. 1,750 ft.

Park County

General Pet. Corp. No. 1 Govt., NW NW NW sec. 33-47-100. R.U.R.
Resolute Oil Co. No. 1 State, C NW SW sec. 16-57-101w. Drlg. hd. sdy. sh. 5,216 ft.

Sheridan County

Beaver Creek Oil Co. No. 1 Allison, SW SE sec. 15-55n-85w. S.D. 3,801 ft.

Sublet County

Progressive Oil Co. No. 1 Haddenham, SE NW SW sec. 21-28n-113w. Drlg. 380 ft.

Sweetwater County

Mountain Fuel Supply Co. No. 1 Nightingale, C SW NE sec. 32-16n-104w. T.D. 2,362 ft.; pipe at 2,317 ft.; C.O. 2,340 ft.
Bridger Basin Oil Co. No. 1-B, NW NW SW sec. 10-14n-117. Drlg. 1,165 ft.

Uinta County

Bridger Basin Oil Co. No. 1-B, NW NW SW sec. 10-14n-118. Drlg. 1,200 ft.

Washakie County

Arlton & Doyle No. 1 Govt., SW SW SE sec. 29-48n-91. S.D. 984 ft.
Wyoming O. & R. Co. No. 2 Govt., NW SW SW sec. 31-48n-90w. T.D. 1,104 ft.; fsg. tools.
Wyoming O. & R. Co. No. 1 State, NE SE NE sec. 36-48n-91. Spdg. 20 ft.; (first report).
Bruce Teeters No. 3 Govt., CWL SW SW sec. 30-48n-90. M.I.M.; (first report).

Weston County

Conway Oil Corp. No. 1 Govt., C SE NW sec. 7-41n-60w. Drlg. 2,600 ft.; gravelly form. near base Minnelusa.
Beaver Creek Oil Synd. No. 1 State, C NE NE sec. 23-44n-63w. R.U. and ready to spud; W.O. wtr.
Hawkeye Supply Co. No. 5, CWL NW SW sec. 18-46-63. Sd. 1,428-50 ft.; shot with 10 qts.; C.O.
Dubuque-Wyoming Synd. No. 2, SE NW NW sec. 31-46-63. Drlg. in top of sd. 1,427 ft.
Al Jones No. 13 Bock, SW SW NE sec. 21-46n-63. Drlg. 220 ft.
Chas. Stough No. 3, C SW NW sec. 4-46n-63. Drlg. 200 ft.

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NEBRASKA

Dawes County

Stephens Oil Corp. No. 1 Palmer, C NW SW sec. 1-33n-50w. Drlg. 600 ft.

Red Willow County

C. W. Kelly et al No. 1 Bower, SE SW SE sec. 2-2n-29w. S.D. 1,450 ft.

Sioux County

J. M. Huber Corp. and United Producers, Inc., et al No. 1 Morgan, C SW SW sec. 32-35n-56w. Spdg.

Franklin County

Wm. Steinlee No. 1, SE NE SE sec. 25-1n-15w. Loc.; (first report).

Grant County

Byrd-Frost, Inc., and Magnolia Pet. Co. No. 1, NE NE NW sec. 11-24n-38w. Contr. to Helmerich & Payne, 7,800-ft. test; M.I.M.; (first report).

UTAH

Daggett County

Mountain Fuel Supply Co. No. 1 State, NW NE SW sec. 16-3n-24e. Drlg. 2,665 ft.

Emery County

California Co. No. 1 Palm Unit, C SW SW sec. 22-23s-11e. M.I.M. and drlg. W.W.

Grand County

Columbia Grade Co. No. 1 Rath, SW SE sec. 12-35n-20e. Drlg. 1,300 ft.

Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 32-22e. S.D. 4,880 ft. to resurvey; went through 2,400 ft. of Permian, Rico and Cutler beds.

Utah County

Diamond Oil Co. No. 4 Govt., CSL SE NW sec. 10-8s-5e. Drlg. 3,989 ft.

Summit County

Longwell Pet. Co. No. 1, SE SW SE sec. 35-3n-5e. Drlg. 1,550 ft.

Washington County

Arrowhead Pet. Corp. No. 1-A, SE SW NE sec. 1-43s-15w. Drlg. 2,512 ft.

MONTANA

Big Horn County

The Big Horn Oil & Gas Co. No. 26, NW NW SE section 20-1s-33, Hardin shallow gas district, was completed at 702 feet in the Frontier for 250,000 feet of gas.

Big Horn O. & G. Co. No. 27, CWL SE NE sec. 20-1s-33e. Drlg. 350 ft. (first report).

Daniels Pet. Co. No. 1 May, C SE SE sec. 13-1s-33e. Drlg. 3,540 ft. (C.D.).

Carbon County

Ohio Oil Co. No. 1 Northern Pacific, SE NE SW sec. 11-7s-21. Drlg. 4,557 ft.

Round Butte O. & G. Co. No. 2, CWL NE SE sec. 3-8s-23e. Spdg. (first report).

Daniels County

The Whitetail Oil & Gas Co. No. 1, NW NE NW section 10-36n-50e, in the Scobey district, was unable to shut off water and was abandoned at 2,500 feet. This wildcat was drilled to 1,845 feet several years ago and had a show of gas with 1,400 feet of water at 1,750 feet. It resumed last June and after cementing the 10-inch at 2,498 feet, ran into more water.

Fallon County

One of the largest gas wells in the Baker shallow gas field on the Baker-Glendive anticline was completed in the Montana-Dakota Utilities Co. No. 75, C SW section 25-9n-58. It was completed at 1,852 feet and made 31,000,000 feet of gas with a rock pressure of 150 pounds in the Judith Basin sand at 840-975 feet and 250,000 feet of gas in the Eagle at 1,558-1,852 feet. It is located about 30 miles to the northwest of the deep test being drilled by the same company.

Montana-Dakota Utilities Co. No. 1 Unit, NE NE NW sec. 17-4n-62. Drlg. 7,540 ft. in dolomite.

Montana-Dakota Utilities Co. No. 2 Unit 8, C NE SW sec. 8-4n-62. R.U.; W.O. tools.

Emmons et al No. 3, SE NE NE sec. 6-21n-18e. Spd. to 100 ft. and S.D. for wtr. (first report).

Fergus County

Minnesota Co. No. 1 Fenholt, SE NW SW sec. 24-21n-18e. S.D. 1,100 ft.; tools still in hole.

Judith Operating Co. No. 2 Govt., NW NE sec. 5-22n-17e. Drlg. 2,450 ft.

Kalispel-Kevin Oil Co. No. 2 Emmons, C SW SE sec. 20-2-18e. Drlg. 576 ft.

Glacier County

Three wells were completed in the Cut Bank field, of which one was in the gas area. The best well was the Dakota-Montana Oil Co. No. 2 Matson, CNL NE NW section 14-34n-6w, in the old part of the development and in a spotted district. Oil rose 2,500 feet from the pay at 2,892-2,907 feet and it swabbed 300 bbls. the first 24 hours. Total depth is 2,910 feet.

Dr. Peter Potter No. 1 Tribal-125, SW NE NE section 12-32n-6w, formerly carried as Wilkinson and others, is one of the Indian tracts sold last fall and extends the proven area half a mile to the southwest. Total depth is 2,968 feet and elevation 3,651 feet. It swabbed 100 bbls. first 24 hours and was then shot with 10 quarts and is cleaning out. The pay was at 2,936-68 feet.

The gas well is the Montana Power Gas Co. No. 1-G State, NW cor. SE section 16-35n-5w. It was drilled to 2,846 feet and gauged 8,030,000 feet of gas from the Cut Bank at 2,802-46 feet. The Sunburst at 2,760-66 feet was dry. The elevation is 4,068 feet.

G. A. Bodnar, Agt., No. 1 Govt., CSL SW SE sec. 14-36n-6w. Drlg. 1,900 ft.; good S.G. at 1,895 ft.

British-American Oil Co. No. 11 Tribal, Lot 7, (NW NE) sec. 10-34n-6w. M.I.M.

Pardee Drlg. Co. No. 2 Morrison, CEL NE SE sec. 24-33n-6w. Rig. (Formerly Cobb-Pardee.)

A. B. Cobb No. 2 Jackson-Reagan, NE NE NW sec. 5-32n-5w. R.U.

Consolidated Gas Co. No. 2 All.-114, C SE SW sec. 31-33n-5w. T.D. 2,855 ft.; jarring on tools 1,000 ft. from top.

A. E. Crumley No. 1 All.-112, C SW SW sec. 6-32n-5w. Drlg. 1,663 ft.

B. V. Hole No. 1 All.-124, 640 ft. out of NE cor. sec. 1-32n-6w. Drlg. 2,510 ft.

Wm. Hanlon, Agt., No. 1 All.-131, Lot 10, (SE NW) sec. 7-32n-5w. Drlg. 2,420 ft.

Kately-Drumheller No. 1 Matson, Lot 4, sec. 10-34n-6w. Loc. (first report).

Kincheloe-Hanlon No. 2 State, NE NE NE sec. 36-33n-6w. Cmtd. off tools at 2,735-75 ft.

R. E. Lee No. 1 All.-137, SE SW NE sec. 26-33n-6w. Drlg. 2,875 ft.

Montana Power Gas Co. No. 1 Robb, C NW SW sec. 9-33n-5w. Drlg. 2,570 ft.

Montana Power Gas Co. No. 2 Miller, SW SE NW sec. 32-33n-5w. Drlg. 2,420 ft.

Nadeau Bros. No. 1 Ewald, C NE SW sec. 7-32n-5w. Drlg. 2,945 ft.

H. R. Patterson No. 1 Chatterton, SE SE NE sec. 22-32n-6w. Drlg. 600 ft.

H. R. Patterson No. 1 Simero, C SE NE sec. 1-33n-6w. Cmtd. 10-in. at 480 ft.; Colo. 450 ft.

Stanley Gray No. 1 All.-132, NW SE NW sec. 22-34-7w. Top Madison 3,740 ft.; S.C. 3,740-50 ft.; will shoot and acidize.

Steel Creek Prod. Co. No. 1 Tarrant, C NW SW sec. 19-34n-5w. T.D. 2,775 ft.; straightening crooked hole.

R. C. Tarrant No. 3 Reickhoff, C NE NE sec. 36-32n-6w. Spd. 50 ft. and S.D.

R. C. Tarrant No. 2 fee, C NW NE sec. 13-34n-6w. Drlg. 2,600 ft.

R. C. Tarrant No. 6 Getty, SE NE SW sec. 2-34n-6w. T.D. 2,650 ft.; fsg.

Texas Co. No. 1 Hardwick, C SE NE sec. 17-32n-5w. Drlg. 1,930 ft.

Texas Co. No. 1 Miller, C NW NE sec. 32-33n-5w. Drlg. 200 ft. (first report).

Vern Johnson No. 1 Tribal-116, C NE NE sec. 35-35n-6w. Drlg. 1,375 ft.

Whetstone et al No. 1 Tribal-118, C SW SW sec. 1-32n-6w. Drlg. 2,815 ft.

Stanley Gray No. 1 All.-121, NW SE NW sec. 12-34n-7w. T.D. 3,750 ft.; sdtkg. bit.

Petroleum County

Homestake Oil Co. No. 24-A Govt., C NW sec. 10-15n-29e. Drlg. 1,450 ft. (first report).

H. C. Rowlend No. 1 Kalispel, NE NE SE sec. 35-14n-25e. Drlg. 40 ft.

Judith Basin County

Fletcher E. Hunt No. 3, NW SE NE sec. 30-14n-15w. Drlg. 961 ft.

Pondera County

Clinch Pet., Ltd., No. 1 Hollan, NW SW NW sec. 12-23-6w. T.D. 2,000 ft.; C.O. 1,500 ft.

Warren Hastings No. 3 Erickson, NW SW NW sec. 10-27n-4w. Cmtd. 6⅝-in. on bottom at 1,904 ft.

Gordon Campbell No. 1 Hughes, NW NE NW sec. 12-30n-4w. Drlg. 2,345 ft. (C.D.).

Jones-Chambers No. 1 Erickson, SW SE SW sec. 3-27-4w. Bldg. drk.

Teton County

R. C. Tarrant No. 1 Wallenstein, NW NW SW section 9-27n-5w, a wildcat 6 miles west of the Pondera field, was plugged and abandoned at 2,505 feet. It had the top of the Madison at 2,492 feet with a show for 500,000 feet of gas. After setting pipe it was acidized, but showed no increase. The location is 1¾ miles north of Ned Cheedle No. 1 Balsinger, which was abandoned in 1934 in the Madison at 2,554 feet.

Toole County

There were three completions in the Kevin-Sunburst field, of which two were dry and abandoned. Welch Brothers No. 1 Dewald, SW NE NE section 26-36n-2w, a semiwildcat on the north, was dry in the Sunburst at 1,551-56 feet, but had 250 feet of oil in the Ellis-Madison at 1,787 feet. Tools were fished out and hole acidized without making the well commercial.

The Makaby Oil, Ltd., No. 1 Beaupre, SW cor. section 5-35-2w, was abandoned at 1,720 feet after encountering water in the Ellis-Madison.

Cassidy & Cassidy No. 2 Carlson, CWL SE NE section 22-35-3w, is pumping 3 bbls. daily after acidizing show in the Ellis-Madison at 1,764-81 feet.

A. Beardslee No. 4 Swears, sec. 9-35n-2w. Drlg. 1,150 ft.

Alexander-Sorrell No. 1 Strange, NE SE SE sec. 31-35n-3w. Drlg. 1,400 ft.

Boru Oil Co. No. 1 Reynolds, SW NE NW sec. 31-33n-4w. T.D. 1,435 ft.; W.O. rig.

Cook & Eddy No. 2 Haskins, SE SW SW sec. 25-36n-2w. R.U.

Coolidge & Coolidge No. 1 Badger Oil Co., NW SW NW sec. 31-36n-1w. Spd. and S.D.

Coolidge & Coolidge No. 1 Maley, SW SW SW sec. 36-36n-1w. Drlg. 1,750 ft.

A. E. Crumley No. 10 Shaw, NE SW NE sec. 35-36n-2w. Drlg. 1,375 ft.

Frazier & Smith No. 1 Van Note, CWL SW NW sec. 30-35n-2w. Spdg. 10 ft. (loc. cor.).

T. P. Kyle No. 1 Wolnsti, CSL SE SE sec. 3-37n-1w. S.D. 2,519 ft.; Sunburst at 2,435 ft.; Cut Bank sd. at 2,516 ft.; S.O. and 1,000 ft. sulfur wtr.

Mahill Oil Co. No. 1 Van Note, NW NW SW sec. 30-35n-2w. T.D. 1,360 ft.; rng. 6⅝-in.

Munger No. 1 Peterson, NW NW SW sec. 8-35n-2w. S.D. 1,200 ft.

Pfabe & Engleking No. 1 Klawitter, CWL SE SE sec. 7-35n-1w. Drlg. 850 ft.

Texas Pacific C. & O. Co. No. 1 Pewters, NW NE NE sec. 21-35n-2w. Show oil and water in Ellis-Madison at 1,525 ft.; will acidize.

R. C. White No. 2 Haugen, CNL NE SW sec. 11-35n-3w. T.D. 1,528 ft.; C.O.

Michigan Fields

(Continued from Page 106)

test, struck salt water, again dashing operators' hopes for oil in another county which, like Mecosta, has produced only shallow gas. Eight other tests are listed in as many townships in Gratiot, however, as the search for oil continues.

Ogemaw County

Four Dundee tests for oil in Ogehaw and West Branch Townships, Ogemaw County, were drilling with oil in the hole and expected to be completed soon. They include Gordon

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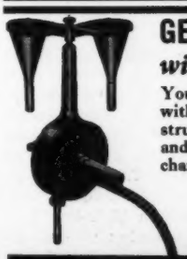

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No. 3480 W. H. CURTIN & COMPANY, INC. HOUSTON, TEXAS

Oil Co. No. 1 J. and K. Holt, SE SW SE section 13-22n-1e, Ogemaw Township, already good for 25 bbls. initially at 2,827 feet. The other three are J. W. Leonard, Jr., trustee, No. 2 Heintz estate, SE NW NE section 24, Ogemaw Township; and R. F. Voorhees, Inc., No. 1-A Donavan, NW SW NW section 19-22n-2e, and Wiser Oil Co. No. 3 Horne, SW SE NE section 19, both in West Branch Township.

Meredith Oil Co. abandoned No. 1 George Diebold, wildcat test in SE SW SW section 17-21n-1e, Edwards Township, Ogemaw County, at about 700 feet when it was discovered formations were running low, it was reported.

Seventeen other Ogemaw tests were active in the four townships of Horton, Mills, Ogemaw and West Branch, in which commercial production has been developed. In addition three locations are listed.

Wildcat Dusters

Three wildcat "dusters" completed Michigan's record for last week.

Thalman-Morris, trustee, No. 1 Kohlman, NE NE NE section 10-26n-7e, was dry in the extreme northeast section of the lower peninsula.

Petroleum Exploration Co. No. 1 Cable, SE NE NE section 12-5n-2w, Dewitt Township, Clinton County, was dry in the central section and Trenton Oil Producing Co. No. 1 Stone, SE SE SE section 24-7s-6e, Summerfield Township, Monroe County, failed at 2,074 feet after a light show in the Trenton limestone in the southeastern corner of the state.

Wildcat Locations

Six more wildcat locations have been placed under permit by the state conservation department in widely scattered sections of the lower peninsula.

In the extreme southeast corner of the state, McClanahan Oil Co. picked a site on the Buffalo Land Co. lease, SE NE NW section 10-2n-4e, Clayton Township, Arenac County. This test will be drilled about 8 miles north of a wildcat which last week struck shows of gas and oil in the Berea and Traverse and is the fourth in the county recently attracting increased interest among wildcatters.

Stewart-Atha, Inc., took out a permit for No. 1 Joseph Wittig, SE SE SE section 23-11n-1w, a new wildcat in Lafayette Township, Gratiot County, central Michigan. It is 8 miles east of a recent Dundee failure in Emerson Township, same county.

Down in Ingham County, southeast of the state capital, Petroleum Exploration Co. has staked out No. 1 F. Burgess, SW SW SE section 12-3n-1w, Alaiedon Township, one township north of another Ingham County wildcat which recently started drilling in Portland Township.

South of Saginaw, where the state's first commercial field was opened in 1925, W. R. Borough, Inc., has made location for No. 1 M. Brady and Fordney estate, SW SW NW section 29-11n-4e, Spaulding Township, Saginaw County.

Groom and Ude Oil & Gas Corp. have taken out a permit for No. 1 Lambert LaPorte, SW NW SW section 20-21n-3e, Horton Township, Ogemaw County, about 5 miles south of the West Branch pool.

Leslie T. Barber No. 1 E. M. Jensen, NW NW SE section 19-12n-6w, Home Township, Montcalm County, 2 miles southeast of the Tri-Township gas field, is the sixth wildcat location.

Gulf Coast Fields

(Continued from Page 116)

a leak in the connections shortly after it was completed and it has been killed while repairs are being made. In the Satsuma field, Harris County, Amerada Petroleum Corp. and Stanolind Oil & Gas Co. have made location for their second well, No. 1 Carpenter, 466 feet from the south line and 466 feet from the west line of the lease in the Francis Fry Survey.

Van Vleck

In the south part of the Van Vleck field, Skelly Oil Co. cemented 7⅝-inch casing on bottom at 7,500 feet at No. 2 Metzger, after a 10-minute drill stem test from 7,497-7,500 feet tested 56 pounds of pressure, 960 feet of oil and 175 feet of mud and brackish water. Location is in the M. Cummins Survey.

Hardin County

Republic Production Co. and Houston Oil Co. No. 1 G. W. Brooks, on the Silsbee prospect, northeastern Hardin County, is still burning and all efforts to extinguish it have failed. The company has rigged up a relief well which should be spudded during the first of the week. The well continues to make an estimated 50,000,000 feet of gas and from 2,500 to 3,000 bbls. of oil daily. No. 1 Brooks blew out from the Cockfield sand bottomed at 6,982 feet and is on a block of 40,000 acres of which the Houston Oil Co. has a half interest.

Coastal Louisiana

Mike Hogg and others No. 1 Laws Realty Co. on the Charenton prospect, St. Mary Parish, continues to hold the interest of operators in Coastal Louisiana due to several drill stem tests which practically assure it of being a producer. One six-minute test from 6,227-32 feet through quarter-inch chokes on top and bottom tested 1 joint of pipe line oil and 90 pounds of pressure. The hole was then cored deeper and another drill stem test was attempted from 6,423-43 feet, but the seat failed to hold and the testing tool slipped to the bottom of the rathole. Late in the week it was coring in sand with an odor of oil from 6,503-15 feet. Other tests that have shown possibilities were made at 4,195 feet and 5,100 feet. Location is in section 30-13s-10e.

To the west at the Jeanerette field, Herton Oil Co. No. 1 State, on the edge of Bayou Teche, cored oil sand from 6,661-81 feet and 7-inch casing has been cemented at 6,651 feet. It is the most southerly well drilled being southeast of the company's No. 1 Barrileaux which is bottomed at 8,258 feet where the operators are fishing for stuck drill stem.

Union Sulphur Co. No. 1 Kaufman extended the producing limits of the Gillis field, Calcasieu Parish, 1,000 feet southeast when it flowed 500 bbls. of pipe line oil per day through a quarter-inch choke with tubing and casing pressure 1,100 pounds. The hole is bottomed at 7,075 feet with the oil sand cored from 7,063-68 feet. Location is in section 13-9s-8w.

Three more interesting wildcat locations were reported, a total of five made during the past two weeks. Northeast of Lake Charles, General Crude Oil Co. has staked No. 1 George P. Buhler, 330 feet from the south and 660 feet west of the NE cor. SE section 30-8s-9w. The well is situated on a block of 3,000 acres that was secured from the Adams Royalty Co. which retains an interest in the block. Union Sulphur Co., Magnolia Petroleum Co. and Gulf Oil Corp. are reported to have protection acreage around the block.

Vermilion Parish

In the southern part of Vermilion Parish, Stanolind Oil & Gas Co. made location for No. 1 Bermillion Farm, 1,320 feet south and west of the south bank of the Intracoastal Canal from a point at its intersection with the Vermilion River. The block which is known as the South Abbeville prospect was found in 1935 by reflection seismograph shooting and centers around Township 14s, Range 3e.

On the South Roanoke prospect, Jefferson Davis Parish, Shell Petroleum Corp. is moving in material for No. 1 Joe Sturdivant, 440 feet south and 1,800 feet west of the NE cor. section 25-10s-4w. It is about 5 miles south of the Roanoke field and southwest of the South Jennings prospect being explored by Stanolind Oil & Gas Co. No. 1 Calcasieu National Bank which is coring sand below 8,620 feet after coring sand with an odor of gas at 8,582 feet.

On the Abbeville prospect, Vermilion Parish, Continental Oil Co. No. 1 Hebert was drilled to a depth of 11,505 feet where the hole was found to be 6 degrees off vertical and has been plugged back to 10,947 feet where it will start redrilling to straighten. Location is in section 20-12s-3e.

Eastern Fields

(Continued from Page 110)

district, John Trexler and others drilled No. 4 on the W. C. Butcher farm through the Squaw sand to 1,830 feet and it was dry.

In Upshur County, Standard Gas Co. completed a test on the Grace Young farm in Mead district at a total depth of 4,023 feet. The Big Injun sand was at 1,430-1,552 feet; the Benson sand at 3,902-12 feet, with gas gauging 250,000 in this formation.

In Wood County, Wamsley Oil & Gas Co. completed a test on the W. R. Stagg farm in Union district in the Maxon sand at a depth of 1,641 feet. It is a gas well gauging 300,000 feet a day along with about 3 bbls. of oil.

Deep Tests

Three new locations were made for Oriskany tests in Kanawha County. The most interesting will be that of United Carbon Co. on the G. W. Facemyer farm on Coolspring Branch of Tupper Creek in Poca district. It is 4½ miles, 70 degrees, west of the W. L. Burdette gas well which places it clear across the north face of Elm district for the most westerly test.

In Elk district, Hayes Oil & Gas Co. is rigging up on the John Judy heirs farm on Aaron Fork of Big Sandy Creek. It is three-quarters of a mile east of G. and D. Copenhaver No. 3.

In Malden district, United Fuel Gas Co. is building a road to a location for No. 4,679 on the Georges Creek Land & Mining Co. tract on Simmons Creek, 1¾ miles south of No. 4,658.

The most important test in Kanawha County is that of United Carbon Co. on the J. A. and M. F. Osborne farm in Big Sandy district and on the Warfield anticline. It is important because of the distance intervening between the good gas wells on this structure in Malden district and has now reached the interesting stage of 5,562 feet or the top of the Corniferous lime. Another hundred feet should place the top of the Oriskany sand.

In Malden district, two wells are reaching completions. Godfrey L. Cabot, Inc., second test on the William Tompkins heirs farm, is shut down in the Lime running casing to 5,003 feet. His No. 3 on the Nellis B. Tompkins farm is shut down running casing to the Lime at 4,822 feet.

In Elk district, Kanawha County, Benedum & Trees reached the top of the Corniferous lime in No. 2 on the Mary C. Wingfield farm at 4,877 feet and are drilling at 4,890 feet. Glen Oil & Gas Co. is cleaning out a cave at 3,900 feet after reaching 4,814 feet on the Virginia Joint Stock Land Bank lease (Morse farm). This is the most easterly test now drilling in Elk district.

In Poca district, United Carbon Co. is drilling at 2,065 feet on the Ahaz Spencer farm; 1,795 feet on the S. H. Milam farm; 1,200 feet on the W. P. Moss farm; and William Zeibold is down 1,700 feet in the test on the Griffith and Dixon lease.

New Work

In Cabell County, Thermal Gas Co. is moving in material on the C. E. Perry farm on Trace Fork in Grant district. In McComas district, Craddock Gas Co. has material on the Millard Pratt heirs farm on the Guyandotte River. Shale Gas Co. is rigging up a second test on the A. S. Hatfield farm on Toms Creek.

In Gilmer County, H. R. Ferrell and others have a location on the Charles Hinzman farm in Troy district. In DeKalb district, Ernest Bush has a rig on the Cunningham & Grogg farm.

In Pleasant County, Dinsmoor & Co. are spudding No. 7 on the J. E. Cunningham farm in McKim district. In Ritchie County, Bayard Sweeney has a rig on the J. D. Goff farm in Murphy district.

In Roane County, Litton Oil & Gas Co. is spudding on the W. J. Thomas farm in Harper district and also on the B. F. Fields farm, same district. In this district, L. L. Reed and others are spudding on the J. R. Bennett farm.

In Upshur County, French Creek Oil & Gas Co. has a rig on the Roy Colerider farm in Mead district. Cumberland Allegheny Co. is down 3,970 feet on the H. C. Tolbott farm, and 2,015 feet on the E. F. Crites farm. L. S. Goff Oil & Gas Co. is drilling at 2,145 feet on the O. B. Phillips farm. The Pittsburgh & West Virginia Gas Co. is down 3,894 feet on the Rose L. Strader farm. In Buchanan district, Union Gas Corp. is down 4,112 feet on the J. W. Gould farm. Cumberland Allegheny Co. is down 1,300 feet on the P. L. Kidd farm. In Warren district, Columbian Carbon Co. is drilling at 2,710 feet on the Mary E. Bennett farm.

In Wetzel County, Manufacturers Light & Heat Co. has a rig on the Harry Palmer farm on Proctor Creek in Proctor district, and is drilling a second test on the S. A. Schritchfield farm on Thomas Run of Long Drain. Union Gasoline & Oil Corp. has made a location for No. 3 on the E. P. Oliver farm.

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location:	S.T.R.	Depth	Status
Shell Oil Co., No. 17 Capitan, Santa Barbara Co.	32- 5-30	3,160	cleaning out
Shell Oil Co., No. 18 Capitan, Santa Barbara Co.	32- 5-30	212	sd. sh. drlg.
General Pet. Corp., No. 16 Capitan, Santa Barbara Co.	32- 5-30	2,751	cmtd. 2,660
Barnsdall-Rio Grande, No. 1 Elwood, Santa Barbara	15- 4-29	3,208	cleaning out
Bush Oil Co., No. 2 Santa Maria, Santa Barbara Co.	25-10-34	2,165	sd. sh. drlg.
Union Oil Co., No. 7 Santa Maria, Santa Barbara Co.	24-10-34	2,578	pump 151 b.d.
Union Oil Co., No. 11 Santa Maria, Santa Barbara Co.	26- 9-34	3,576	deepening
Fields, O. C., No. 1 Lompoc, Santa Barbara Co.	11- 7-33	1,980	reaming
York Oil Co,, No. 2-A Lompoc, Santa Barbara Co.	33- 8-34	2,097	sd. sh. drlg.
Moore, Inc., No. 1 Santa Maria, Santa Barbara Co.	25-10-35	6,200	br. sh. drlg.
Top Row Oil Co., No. 1 Lompoc, Santa Barbara Co.	10- 6-35	351	cleaning out
Bankline Oil Co., No. 1 Coal Oil Pt., Santa Barbara	tideland	5,510	redrlg. 4,251
Dyak Pet. Co., No. 1 Mesa, Santa Barbara Co.	28- 4-27	2,551	hd. sd. drlg.
Union Oil Co., No. 10 Bardsdale, Ventura Co.	12- 3-20	6,561	prod. test
Duke Oil Co., No. 1 Bardsdale, Ventura Co.	7- 3-19	5,635	idle
Calkan Pet. Co., No. 1 Sespe, Ventura Co.	23- 5-20	904	sd. sh. drlg.
Supreme Oil Co., No. 1 Sespe, Ventura Co.	1- 4-20	1,700	idle
Condor Oil Co., No. 1 Sespe, Ventura Co.	6- 4-19	1,376	reaming
Topa Topa Oil Co., No. 1 Sespe, Ventura Co.	33- 5-19	2,200	will cmt.
Wasibi Oil Co., No. 1 Sespe, Ventura Co.	33- 5-19	790	hd. sh. drlg.
Laing & Jacobs, No. 1 Shiells Canyon, Ventura Co.	32- 4-19	1,275	fishing
Petroleum Securities, No. 1 Shiells Canyon, Ventura	3- 3-19	4,264	sd. sh. drlg.
Texas Co., No. 130 Shiells Canyon, Ventura Co.	4- 3-19	4,264	O.S. drlg.
El Rancho Oil Co., No. 1 Shiells Canyon, Ventura Co.	9- 3-19	5,075	idle
Oil Ridge Oil Co., No. 1 Hopper Canyon, Ventura Co.	6- 4-18	1,776	hd. sd. drlg.
Bolsa Chica Oil Co., No. 4 Temescal, Ventura Co.	4- 4-18	1,562	sd. sh. drlg.
Rennie Brothers, No. 1 Santa Paula, Ventura Co.	21- 4-21	831	sd. sh. drlg.
Munding, J. J., No. 1 Ojai, Ventura Co.	22- 4-22	501	idle
Ventura Expl. Co., No. 1 Saticoy, Ventura Co.	30- 3-22	9,150	reaming
Vaca Oil Co., No. 1 Oxnard, Ventura Co.	6- 1-21	2,198	sd sh drlg.
General Pet. Corp., No. 2 Oxnard, Ventura Co.	26- 2-23	9,047	sd. sh. drlg.
C. C. M. Oil Co., No. 9-B Rincon, Ventura Co.	16- 3-24	4,704	P.B. 3,726
Continental Oil Co., No. 5 San Miguelito, Ventura Co.	24- 3-24	6,731	redrlg. 6,691
Honolulu Oil Corp., No. 1 South Mountain, Ventura Co.	23- 3-21	2,698	sd. sh. drlg.
Den Petroleum Co., No. 1 Devils Den, Kern Co.	20-25-19	1,287	redrlg. 601
Standard Oil Co., No. 1 Lost Hills, Kern Co.	2-26-20	6,887	fish. D.P.
Universal Oil Consd., No. 1 Lost Hills, Kern Co.	20-26-21	1,171	sd. sh. drlg.
East Puente Oil Co., No. 22 McKittrick, Kern Co.	11-30-21	1,138	O.S. drlg.
Welport Oil Co., No. 15 McKittrick, Kern Co.	26-29-21	1,230	P.B. 1,185
Bergman, H. L., No. 1 McKittrick, Kern Co.	30-30-22	1,391	br. sh. drlg.
General Pet. Co., No. 1 South Belridge, Kern Co.	30-28-21	11,377	suspended
Rio Grande Oil Co., No. 1 Belridge, Kern Co.	18-28-20	2,378	sd. sh. drlg.
Tembior Range Oil Co., No. 1 Belridge, Kern Co.	24-28-20	1,030	sd. sh. drlg.
Associated Oil Co., No. 5 North Belridge, Kern Co.	34-27-20	7,598	hd. sd. drlg.
Belridge Oil Co., No. 18-35 North Belridge, Kern Co.	35-27-20	8,120	cmtd. 8,102
Belridge Oil Co., No. 17-35 North Belridge, Kern Co.	35-27-20	8,391	flow. 4,498 b.d.
Belridge Oil Co., No. 5-1 North Belridge, Kern Co.	1-28-20	3,673	sd. sh. drlg.
Union Oil Co., No. 20 North Belridge, Kern Co.	36-27-20	9,684	P.B. 5,128
Continental Oil Co., No. 8 North Belridge, Kern Co.	36-27-20	3,461	sd. sh. drlg.
C. C. M. Oil Co., No. 50 Kern Front, Kern Co.	23-28-27	2,150	pump. 210 b.d.
Pacific Oil & Gas Co., No. 1 Kern Front, Kern Co.	1-28-27	3,448	gr. sd. drlg.
Republic Pet. Co., No. 16 Kern Front, Kern Co.	11-28-27	2,050	dry; abd.
Seven Spot Oil Co., No. 1 Kern Front, Kern Co.	13-28-27	1,270	hd. sd. drlg.
Vega Oil Co., No. 2 Kern Front, Kern Co.	11-28-27	1,895	bailing
National Oil Co., No. 1 Kern Front, Kern Co.	11-28-27	1,926	pump. 126 b.d.
David Oil Co., No. 8 Kern River, Kern Co.	8-29-28	935	rig. to pump
Bell Corp., No. 1 McVan, Kern Co.	14-27-27	1,158	cmtd. 1,130
Ausbrit Oil Co., No. 1 Premier, Kern Co.	20-27-27	2,139	cleaning out
McAdams Oil Co., No. 1 Dominion, Kern Co.	32-26-28	1,902	P.B 1,880
Modoc Pet. Co., No. 1 Dominion, Kern Co.	28-26-28	1,537	rig. to pump
Shell Oil Co., No. 16 Mount Poso Security, Kern Co.	16-27-28	1,755	rig. to pump
Shell Oil Co., No. 17 Mount Poso Security, Kern Co.	16-27-28	1,855	pump. 226 b.d.
Bethlehem Expl. Co., No. 1 Mount Poso, Kern Co.	10-27-27	1,300	sd. sh. drlg.
Cochran Oil Co., No. 1 Jasmine, Kern Co.	31-25-27	3,761	gr. sd. drlg.
Doyle Pet. Co., No. 1 Jasmine, Kern Co.	15-25-27	2,796	sd. sh. drlg.
Woods & Bailey, No. 1 McFarland, Kern Co.	16-26-26	4,650	idle
Dixie Lee Oil Co., No. 4 Fruitvale, Kern Co.	23-29-27	3,782	cmtd.
Elbee Oil Co., No. 1 Fruitvale, Kern Co.	23-29-27	3,571	O.S. drlg.
Mosebach Oil Co., No. 1 Fruitvale, Kern Co.	21-29-27	4,112	idle
Trico Oil & Gas Co., No. 1 Fruitvale, Kern Co.	23-29-27	3,732	rig. to pump
Exeter Oil Co., No. 1 Fruitvale, Kern Co.	21-29-27	4,117	cmtd. 4,056
Magnet Oil Co., No. 3 Fruitvale, Kern Co.	21-29-27	4,114	cleaning out
Magnet Oil Co., No. 4 Fruitvale, Kern Co.	21-29-27	2,792	sd. sh. drlg.
Western Gulf Oil Co., No. 27 Fruitvale, Kern Co.	27-29-27	3,438	completing
Western Gulf Oil Co., No. 28 Fruitvale, Kern Co.	21-29-27	3,792	cmtd. 3,775
Western Gulf Oil Co., No. 28 Fruitvale, Kern Co.	27-29-27	3,389	sd. sh. drlg.
Mohawk Oil Co., No. 17 Fruitvale, Kern Co.	28-29-27	3,742	pump. 134 b.d.
Mohawk Oil Co., No. 18 Fruitvale, Kern Co.	11-29-27	2,890	rig. to pump
Mohawk Oil Co., No. 19 Fruitvale, Kern Co.	23-29-27	3,169	cleaning out
Tarr & McComb, No. 3 Fruitvale, Kern Co.	28-29-27	3,190	cleaning out
Oil Incorporated, No. 1 Fruitvale, Kern Co.	26-29-27	3,370	cmtd.
Nydia Pet. Co., No. 2 Fruitvale, Kern Co.	26-29-27	3,410	cleaning out
White & Haar, No. 1 Fruitvale, Kern Co.	28-29-27	4,710	cleaning out
Allied Pet. Co., No. 19 Mountain View, Kern Co.	19-30-29	5,102	flow. 298 b.d.
Barnsdall Oil Co., No. 8 Mountain View, Kern Co.	19-30-29	677	sd. sh. drlg.
Hogan Pet. Co., No. 16 Mountain View, Kern Co.	32-30-29	6,159	cmtd. 5,878
Hogan Pet. Co., No. 17 Mountain View, Kern Co.	29-30-29	5,965	sd. sh. drlg.
Standard Oil Co., No. 31 Mountain View, Kern Co.	13-30-28	4,976	sd. sh. drlg.
Wood-Callahan Oil Co., No. 4 Mountain View, Kern Co.	24-30-28	5,151	cmtd. 5,018
Fullerton Oil Co., No. 1 Mountain View, Kern Co.	18-30-29	4,664	sd. sh. drlg.
Shell Oil Co., No. 12 Mountain View, Kern Co.	32-30-29	5,833	sd. sh. drlg.
Mohawk Pet. Co., No. 1 Arvin, Kern Co.	10-31-29	6,025	flow. 180 b.d.
General Pet. Corp., No. 1 Arvin, Kern Co.	26-31-29	3,980	sd. sh. drlg.
Ohio Oil Co., No. 1 Rio Bravo, Kern Co.	1-30-25	9,000	gr. sd. drlg.
Shell Oil Co., No. 8 Round Mountain, Kern Co.	7-28-29	1,530	rig. to pump
Shell Oil Co., No. 7 Round Mountain, Kern Co.	7-28-29	1,490	sd. sh. drlg.
Shell Oil Co., No. 6 Round Mountain, Kern Co.	17-28-29	1,976	cmtd. 1,930
Honolulu Oil Corp., No. 54 Round Mountain, Kern Co.	18-28-29	1,892	pump. 348 b.d.
Honolulu Oil Corp., No. 37 Round Mountain, Kern Co.	18-28-29	1,695	sd. sh. drlg.
Cole & Wood, No. 1 Edison, Kern Co.	24-30-29	950	sd. sh. drlg.
Buffalo Oil Co., No. 2 Edison, Kern Co.	24-30-29	548	idle
Jergins Trust, No. 26 Edison, Kern Co.	23-30-29	3,139	P.B. 1,996
Jergins Trust, No. 27 Edison, Kern Co.	23-30-29	2,997	P.B. 2,752
Jergins Trust, No. 28 Edison, Kern Co.	24-30-29	1,510	P.B. 905
Jergins Trust, No. 29 Edison, Kern Co.	14-30-29	1,566	pump. 270 b.d.
Wood-Callahan Oil Co., No. 2 Edison, Kern Co.	23-30-29	2,115	pump. 140 b.d.
Bender, E. A., No. 1 San Emidio, Kern Co.	14-10-23	900	fishing
Texas Co., No. 1 San Emidio, Kern Co.	11-11-22	8,085	cleaning out
Shell Oil Co., No. 2 Stevens, Kern Co.	29-30-26	7,188	sd. sh. drlg.
Elk Hills Pet. Co., No. 1 Elk Hills, Kern Co.	14-31-24	5,096	br. sh. drlg.
Fenray Oil Co., No. 1 Midway-Sunset, Kern Co.	34-32-24	4,210	fish. D.P.
C. C. M. Oil Co., No. 1-28 Midway-Sunset, Kern Co.	28-32-23	2,221	hd. sh. drlg.
Evans, H. B., No. 11 Midway-Sunset, Kern Co.	35-32-23	1,753	O.S. drlg.
Evans, H. B., No. 16 Midway-Sunset, Kern Co.	35-32-23	531	sd. sh. drlg.
Garner Royalties, No. 7 Midway-Sunset, Kern Co.	22-32-23	1,985	sd. sh. drlg.
Foster, R. A., No. 1 Midway-Sunset, Kern Co.	2-32-23	4,425	cleaning out
Quality Oil Co., No. 2 Midway-Sunset, Kern Co.	27-32-23	1,872	gr. sd. idle
Quality Oil Co., No. 3 Midway-Sunset, Kern Co.	22-32-23	960	sd. sh. drlg.
Gibson Oil Co., No. 5 Midway-Sunset, Kern Co.	8-11-23	3,189	pump. 70 b.d.
General Pet. Corp., No. 61 Midway-Sunset, Kern Co.	24-31-23	4,058	cleaning out
Honolulu Oil Corp., No. 32 Midway-Sunset, Kern Co.	14-32-24	5,052	P.B. 2,894
North American Oil Co., No. 2 Midway-Sunset, Kern	2-32-24	4,337	pump. 50 b.d.
Signal Oil Co., No. 6 Midway-Sunset, Kern Co.	8-11-23	3,344	pump. 40 b.d.
Standard Oil Co., No. 9-5 Midway-Sunset, Kern Co.	5-11-23	3,921	P.B. 2,915
Standard Oil Co., No. 219 Midway-Sunset, Kern Co.	33-24-24	3,090	pump. 470 b.d.
Standard Oil Co., No. 55 Midway-Sunset, Kern Co.	33-32-24	3,201	pump. 410 b.d.
Standard Oil Co. No. 9-33 Midway-Sunset, Kern Co.	33-32-24	2,952	sd. sh. drlg.
Alford Oil Co., No. 6 Midway-Sunset, Kern Co.	25-12-24	2,750	cmtd. 2,592
Burkholder Oil Corp., No. 1 Midway-Sunset, Kern Co.	23-32-23	2,536	P.B. 2,297
Safeway Oil Co., No. 1 Midway-Sunset, Kern Co.	26-32-23	2,865	sd. sh. drlg.
Stimson Oil Co., No. 1 Midway-Sunset, Kern Co.	27-32-23	2,611	fish. idle
Jerman, R. W., No. 1 Midway-Sunset, Kern Co.	17-31-23	2,640	sd. sh. drlg.
Union Oil Co., No. 2 Midway-Sunset, Kern Co.	22-32-23	811	sd. sh. drlg.
Union Oil Co., No. 9 Midway-Sunset, Kern Co.	25-12-24	2,594	sd. sh. drlg.
Merritt Annex Oil Co., No. 5 Midway-Sunset, Kern Co.	25-12-24	2,575	sd. sh. drlg.
Obispo Oil Co., No. 12 Midway-Sunset, Kern Co.	32-12-23	3,668	cleaning out
St. Helens Pet. Co., No. 1 Midway-Sunset, Kern Co.	22-32-24	3,674	cmtd. 3,565
Big Ten Oil Co., No. 14 Midway-Sunset, Kern Co.	36-32-23	615	O.S. drlg.
Ohio Oil Co., No. 1 Tejon, Kern Co.	36-11-19	5,430	hd. sd. drlg.
Hall Baker Co., No. 1 Tejon, Kern Co.	35-11-19	2,377	cleaning out
Associated Oil Co., No. 1 Tejon, Kern Co.	17-11-19	1,997	hd. sd. drlg.
Reserve Oil & Gas Co., No. 5 Tejon, Kern Co.	33-11-19	4,490	form. test
Tejon Ridge Oil Co., No. 1 Comanche, Kern Co.	23-32-29	2,561	hd. sd. drlg.
Western Gulf, No. 3 Cantua, Fresno Co.	3-17-15	8,050	hd. sh. drlg.
Standard Oil Co., No. 2 South Coalinga, Fresno Co.	31-21-15	2,474	dry; abd.
Union Oil Co., No. 1 Lillis-Welsh, Fresno Co.	24-21-16	11,127	P.B. 10,729
Shell Oil Co., No. 1 Kettleman North, Fresno Co.	36-21-17	8,807	redrlg. 6,891
K. N. D. A., No. 2 Kettleman North, Fresno Co.	20-21-17	8,856	O.S. drlg.
K. N. D. A., No. 38 Kettleman North Fresno Co.	18-21-17	8,385	cmtd. 8,384
K. N. D. A., No. 21 Kettleman North, Fresno Co.	30-21-17	6,900	br. sh. drlg.
K. N. D. A., No. 43 Kettleman North, Fresno Co.	30-21-17	7,925	hd. sd. drlg.
K. N. D. A., No. 63 Kettleman North, Fresno Co.	28-21-17	2,491	sd. sh. drlg.
K. N. D. A., No. 81 Kettleman North, Fresno Co.	24-21-16	8,895	cleaning out
K. N. D. A., No. 83 Kettleman North, Fresno Co.	24-21-16	8,263	cleaning out
K. N. D. A., No. 83 Kettleman North, Fresno Co.	32-21-17	8,290	flow. 2,160 b.d.
Standard Oil Co., No. 38 Kettleman North, Fresno Co.	27-21-17	8,235	C.P. 7,597
Standard Oil Co., No. 25 Kettleman North, Fresno Co.	19-21-17	8,480	cleaning out
Standard Oil Co., No. 43 Kettleman North, Fresno Co.	19-21-17	8,442	sd. sh. drlg.
Standard Oil Co., No. 56 Kettleman North, Fresno Co.	19-21-17	8,730	prod. test
Standard Oil Co., No. 65 Kettleman North, Fresno Co.	19-21-17	8,346	flow. 998 b.d.
Standard Oil Co., No. 72 Kettleman North, Fresno Co.	19-21-17	8,437	hd. sd. drlg.
Standard Oil Co., No. 3 Kettleman Middle, Kings Co.	19-23-19	4,956	sd. sh. drlg.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Bldg., building.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.P., casing pressure.
Cd. or Crd., cored.
C.D., corrected depth.
Cg., coring.
C.L., center line.
Cmtd., cemented.
C.O., cleaning out
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., pulling big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary
R.U.R.T., rigging up rotary tools.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sd. sh., sandy shale.
Sdtr. or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set
W.P., working pressure.
W.S.O., water shutoff.
W.S.O.O.K., water shutoff O.K.
W.S.O.N.G., water shutoff no good.
W.S.R. or W.O.S.R., wait on standard rig.
Wtr., water.

Kettleman View Oil Co., Well No. 1, Kings Co.	29-22-19	2,455	sd. sh. drlg.
Hurndall, John, No. 1 Pyramid Hills, Kings Co.	16-24-18	1,986	dry; idle
Associated Oil Co., No. 1 Avenal, Kings Co.	33-23-17	1,956	redrlg. 1,895
United Oil Co., No. 2 Panorama, San Luis Obispo Co.	2-32-21	1,506	sd. sh. drlg.
Avila Oil Co., No. 1 Pismo, San Luis Obispo Co.	10-32-13	3,364	hd. sh. drlg.
Martin, J. D., No. 4 Pismo, San Luis Obispo Co.	5-32-13	3,002	sd. sh. drlg.
Martin, J. D, No. 5 Pismo, San Luis Obispo Co.	5-32-13	2,910	sd. sh. drlg.
Birch-Royer Oil Co., No. 1 Pismo, San Luis Obispo Co.	33-31-13	2,082	br. sh. drlg.
Crail Bros., No. 1 Pismo, San Luis Obispo Co.	8-32-13	2,985	sd. sh. drlg.
Jergins Trust, No. 1 Pismo, San Luis Obispo Co.	5-32-13	3,442	gr. sd. drlg.
Barnsdall Oil, No. 1 Carissa Plains, San Luis Obispo	24-28-17	4,785	sd. sh. drlg.
Standard Oil Co., No. 2 McDonald Island, San Joaquin	25- 2-4	5,273	to set pipe
Pure Oil Co., No. 5 Chowchilla, Madera Co.	12-10-13	3,131	sd. sh. drlg.
San Joaquin Oil Co., No. 1 Dos Palos, Merced Co. ...	1-12-11	2,771	sd. sh. drlg.
Northern Counties Pet., No. 1 Tehama, Tehama Co. ..	25-24-3	8,031	sd. sh. drlg.
Shell Oil Co., No. 1 Branch, Monterey Co.	34-24-10	8,994	P.B. 8,750
Texas Co., No. 2 Eureka, Humboldt Co.	22- 3-1	4,428	fish. D.P.
Amerada Pet. Co., No. 2 Rio Vista, Solano Co.	26- 4-2	3,342	sd. sh. drlg.
Standard Oil Co., No. 1 Rio Vista, Solano Co.	35- 4-2	4,544	form. test
Milheim Oil Corp., No. 1 Angiola, Tulare Co.	7-23-23	1,838	cleaning out
Fortine, W. H., No. 1 Terra Bella, Tulare Co.	22-22-26	3,085	P.B. 2,719
Trico Oil & Gas Co., No. 1 Angiola, Tulare Co.	7-23-23	965	sd. sh. drlg.
Associated Oil Co., No. 1 Sargent, San Benito Co.	5-12-4	2,500	sd. sh. drlg.
Seaboard Oil Co., No. 1 Alameda, Alameda Co.	13- 3-3	1,877	sd. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location:	S.T.R.	Depth	Status
Marvin, J. L., No. 1 El Segundo, Los Angeles Co. ...	7- 3-14	7,521	cleaning out
Ohio Oil Co., No. 1 El Segundo, Los Angeles Co. ...	7- 3-14	7,375	sd. sh. drlg.
Signal Finance, No. 1 Hawthorne, Los Angeles Co. ...	10- 3-14	7,051	sd. sh. drlg.
Shell Oil Co., No. 1 El Nido, Los Angeles Co.	33- 3-14	6,263	sd. sh. drlg.
Mari Oil Co., No. 1 Torrance, Los Angeles Co.	35- 3-14	5,575	sd. sh. drlg.
C. C. M. Oil Co., No. 2 Torrance, Los Angeles Co. ...	31- 3-14	3,157	will deepen
Pongratz, Gus, No. 1 Torrance, Los Angeles Co.	31- 3-14	951	sd. sh. drlg.
Black Gold Corp., No. 1 Torrance, Los Angeles Co. ...	31- 3-14	954	cmtd. 845
Petrol Corp., No. 2 Torrance, Los Angeles Co.	31- 3-14	3,610	pump. 340 b.d.
Walken Oil Co., No. 2 Torrance, Los Angeles Co.	31- 3-14	3,701	sd. sh. drlg.
Linderman Oil Corp., No. 1 Torrance, Los Angeles Co.	31- 3-14	3,754	pump. 130 b.d.
Marshall Oil Co., No. 1 Torrance, Los Angeles Co. ...	31- 3-14	3,130	redrlg. 2,161
Dumas-Lewis Oil Co., No. 2 Torrance, Los Angeles Co.	6- 4-14	3,360	cmtd. 3,250
Tu-Jax Oil Co., No. 2 Torrance, Los Angeles Co.	31- 3-14	3,757	rig. to pump
Nelson Pet. Co., No. 1 Hermosa, Los Angeles Co.	18- 4-14	4,825	P.B. 4,700
Emerald Oil Co., No. 2 Redondo, Los Angeles Co. ...	8- 4-14	3,791	will deepen
Standard Oil Co., No. 79 Inglewood, Los Angeles Co.	17- 2-14	3,390	cmtd.
Shell Oil Co., No. 22 Inglewood, Los Angeles Co. ...	8- 2-14	3,665	P.B. 3,270
West American Oil Co., No. 1 Dominguez, Los Angeles	3- 4-13	8,910	salt water
Crude Oil Drlg. Co., No. 1 Dominguez, Los Angeles	31- 3-13	120	tech. spud
Shell Oil Co., No. 84 Dominguez Reyes, Los Angeles Co.	33- 3-13	4,664	sd. sh. drlg.
Union Oil Co., No. 5 Dominguez Carson, Los Angeles	33- 3-13	7,306	redrlg. 6,650
Union Oil, No. 38 Dominguez Callender, Los Angeles	33- 3-13	7,393	P.B. 6,898
Union Oil, No. 47 Dominguez Callender, Los Angeles	33- 3-13	7,570	redrlg. 7,375
Union Oil, No. 49 Dominguez Callender, Los Angeles	33- 3-13	4,381	sd. sh. drlg.
Barnsdall Oil Co., No. 15 Rosecrans, Los Angeles Co.	18- 3-13	6,396	flow. 50 b.d.
Republic Pet. Co., No. 1 Rosecrans, Los Angeles Co.	18- 3-13	6,141	cleaning out
Associated Oil Co., No. 18 Seal Beach, Los Angeles Co.	11- 5-12	6,546	bailing
Continental Oil Co., No. 39 Seal Beach, Los Angeles..	11- 5-12	6,446	test. W.S.O.
Eastern Oil Co., No. 1 Del Rey, Los Angeles Co.	22- 2-15	7,482	test. W.S.O.
Sharby Oil Co., No. 1 Del Rey, Los Angeles Co.	22- 2-15	50	tech. spud
Del Rey Drlg. Co., No. 1 Del Rey, Los Angeles Co. ...	27- 2-15	6,423	sd. sh. drlg.
Union Oil Co., No. 23 Del Rey, Los Angeles Co.	27- 2-15	5,972	fish. D.P.
Yant Pet. Corp., No. 1 Newhall, Los Angeles Co.	1- 3-16	2,413	cleaning out
Holbrook Pet. Co., No. 1 Newhall, Los Angeles Co. ...	28- 4-16	2,352	sd. sh. drlg.
Royalty Service, No. 11-1 Wilmington, Los Angeles Co.	28- 4-13	3,650	pump. 106 b.d.
Richfield Oil Co., No. 1 Wilmington, Los Angeles Co.	20- 4-13	1,897	sd. sh. drlg.
Codri Oil Co., No. 1 Wilmington, Los Angeles Co. ...	29- 4-13	3,710	cleaning out
General Pet. Corp., No. 1 Wilmington, Los Angeles Co.	4- 5-13	5,041	sd. sh. drlg.
Monarch Oil Corp., No. 1 Topango Canyon, Los Angeles	5- 1-16	1,568	sd. sh. drlg.
Wilshire Oil Co., No. 1 Montebello, Los Angeles Co. ...	5- 2-11	6,760	sd. sh. drlg.
Standard Oil Co., No. 82 Montebello, Los Angeles Co.	2- 2-12	9,334	P.B. 3,875
Standard Oil Co., No. 88 Montebello, Los Angeles Co.	2- 2-12	961	idle
Universal Consd., No. 8 Montebello, Los Angeles Co..	5- 2-11	6,855	hd. sh. drlg.
Universal Consd., No. 9 Montebello, Los Angeles Co..	5- 2-11	5,951	water witch
Universal Consd, No. 10 Montebello, Los Angeles Co.	5- 2-11	4,108	cmtd.
Republic Petroleum Co., No. 1 Montebello, Los Angeles	5- 2-11	3,182	sd. sh. drlg.
Richfield Oil Co., No. 2 Montebello, Los Angeles Co.	5- 2-11	7,560	W.S.O. N.G.
Richfield Oil Co., No. 3 Montebello, Los Angeles Co.	5- 2-11	5,544	cmtd.
Texas Co., No. 14 Montebello, Los Angeles Co.	5- 2-11	3,291	sd. sh. drlg.
Texas Co., No. 15 Montebello, Los Angeles Co.	5- 2-11	3,340	sd. sh. drlg.
Keystone Oil Co., No. 1 Pico, Los Angeles Co.	9- 2-11	4,610	hd. sd. drlg.
Bowles, M., No. 1 Santa Fe Springs, Los Angeles Co.	6- 3-11	7,409	idle
Bowles, M., No. 2 Santa Fe Springs, Los Angeles Co.	6- 3-11	7,950	cleaning out
General Pet., No. 46-D Santa Fe Springs, Los Angeles	6- 3-11	4,575	fish. lingr
General Pet., No. 137-F Santa Fe Springs, Los Angeles	5- 3-11	5,225	C.P. 5,227
Twin Bell Synd., No. 3 Santa Fe Springs, Los Angeles	5- 3-11	3,845	pump. water
Ring Oil Co., No. 4 Santa Fe Springs, Los Angeles Co.	5- 3-11	4,908	cleaning out
Union Oil Co., No. 33 Santa Fe Springs, Los Angeles	8- 3-11	4,066	cmtd. 4,066
Vanda Petroleum, No. 1 Santa Fe Springs, Los Angeles	6- 3-11	5,040	sd. sh. drlg.
Bernstein, M. E., No. 1 Artesia, Los Angeles Co.	25- 3-12	5,888	redrlg. 5,152
McVicar & Rood, No. 1 San Jose Hills, Los Angeles Co.	6- 2-9	3,120	dry; abd.
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co. ..	36- 5-5	2,510	suspended
Hillman & Long, No. 1 Westminister, Orange Co.	14- 5-11	8,498	sd. sh. drlg.
Five Point Oil Co., No. 1 Huntington, Orange Co.	36- 5-11	4,850	sd. sh. drlg.
Associated Oil Co., No. 53 Huntington, Orange Co. ...	34- 5-11	3,998	sd. sh. drlg.
Associated Oil Co., No. 8 Huntington, Orange Co.	34- 5-11	4,630	deepening
Standard Oil Co., No. 35 Huntington, Orange Co. ...	34- 5-11	3,500	cmtd. 2,692
Standard Oil Co., No. 12 Huntington, Orange Co. ...	12- 6-11	2,967	recmtd. 2,860
Dunlap & Crampton, No. 1 Huntington, Orange Co.	34- 5-11	3,914	O.S. drlg.
Shell Oil Co., No. 1 Anaheim, Orange Co.	7- 6-10	3,518	idle
Ajax Pet. Co., No. 1 Newport, Orange Co.	27- 6-10	7,262	resume work
Shell Oil Co., No. 19 Brea, Orange Co.	2- 3-10	3,532	reaming
West American Oil Co., No. 1 East Coyote, Orange Co.	24- 3-10	6,031	sd. sh. drlg.
Daly Oil Co., No. 1 East Coyote, Orange Co.	20- 3-9	2,811	flow. 325 b.d.
Union Oil Co., No. 29 Chapman Richfield, Orange Co.	30- 3-9	6,865	sd. sh. drlg.
Union Oil Co., No. 30 Chapman Richfield, Orange Co.	30- 3-9	4,000	sd. sh. drlg.
Union Oil Co., No. 31 Chapman Richfield, Orange Co.	30- 3-9	4,475	water witch
Union Oil Co., No. 33 Chapman Richfield, Orange Co.	30- 3-9	4,002	sd. sh. drlg.
Union Oil Co., No. 34 Chapman Richfield, Orange Co.	30- 3-9	3,410	sd. sh. drlg.
Calif. Eastern Oil Co., No. 1 Placentia, Orange Co. ...	31- 3-9	4,786	circulate oil
Melbourne Pet. Co., Well No. 1, San Bernardino Co. ..	12- 3-8	597	sd. sh. drlg.
Equitable Pet. Co., No. 1 Wildcat, San Bernardino Co.	11-10-5	2,421	hd. sh. drlg.

KANSAS

Week Ending August 15 (Descriptions are East unless marked otherwise)

Barber County

Sinclair Prairie Oil Co. No. 1 Gentry, NE cor. sec. 1-33-15w. Drlg. 3,010 ft.

Barton County

J. A. Brouk et al No. 1 Keil, SE SE NE sec. 11-16-15w. Oswego 3,160 ft.; Siliceous 3,408 ft.; 2,000 ft. fluid in hole; set 5-in. csg.

John Burton No. 1 Wendel, NE cor. sec. 13-19-11w. S.D. 555 ft.

C. L. Price No. 1 Deutsch, NW NW NE sec. 16-16-13w. Drlg. 655 ft.

G. H. Rose and W. H. Lant No. 1 Redetzke, NE NW NW sec. 1-16-11w. Drlg. 2,350 ft.

Torry & Feaster No. 1 Feist, NE NE SE sec. 29-18-11w. Siliceous L. 3,430-32½ ft., T.D.; potential, pumped 346 bbls. oil in 18½ hrs.

Yarnell & Carlson No. 1 Roth, NE cor. sec. 35-18-12w. S.D. 200 ft.

Butler County

Dalton et al No. 1 Miley, C SW NE sec. 17-27-5. S.D. 350 ft.

W. P. Hildebrandt et al No. 1 Farab, SW SW SE sec. 5-29-6. Cellar.

Clark County

Olson & Watchorn No. 1 Morrison, C SE SW sec. 17-32-21w. Set 8-in. csg. 5,143 ft.; R.U.S.T.

Cowley County

A. D. Morton et al No. 1 Roger, SE SE NE sec. 1-31-4. S.D. 2,954 ft.

Edwards County

Royal Pet. Co. et al No. 1 Krupp, NW NW SE sec. 18-24-19w. M.I.M.

Stanolind O. & G. Co. et al No. 1 Donovan, C SE SE sec. 14-26-18w. Anhydrite 1,167 ft.; K.C. 4,028 ft. (cor.). Fsg. 4,580 ft.

Ellis County

Albec Oil Co. No. 1 Union Pacific, NE cor. sec. 9-13-20w. Oswald 3,418 ft.; Cong. 3,670 ft.; C.O. 3,783 ft.

Bradley Oil Co. et al No. 1 Penney-Wann, SE cor. sec. 13-15-20w. Anhy. 1,277 ft.; whipstock 3,400 ft.; drlg. by 3,418 ft.

Bridgeport Mch. Co. No. 1 Ubert, NE NE NW sec. 12-13-18w. Set 6-in. csg. 2,667 ft.

Empire O. & R. Co. No. 1 Herl, SE cor. sec. 22-15-19w. Anhydrite, 1,135 ft.; Topeka 2,935 ft.; Oswald 3,242 ft.; La Motte 3,586 ft.; T.D. 3,598 ft.; D.&A.

Empire O. & R. Co. No. 1 Samuelson, NE NE SE sec. 31-11-16w. Anhydrite 1,270 ft.; fsg. 2,480 ft.

Champlin Refining Co. No. 1 Hadley, SE SW NE sec. 30-11-17w. R.U.R.

Frank Hamilton et al No. 1 Sack, NW NW SE sec. 26-13-19w. Drlg. 2,280 ft.

Jones & Shelbourne No. 1 Gunther, SE SE SW sec. 9-11-19w. Anhydrite 1,417 ft.; drlg. 3,294 ft.

Kansas Dev. Corp. No. 1 Haller, SE SE NW sec. 10-11-18w. Anhydrite 1,190 ft.; Topeka 2,915 ft. (cor.); T.D. 3,050 ft.; acidized; pumped 462 bbls. oil in 13 hrs.

Lario O. & G. Co. et al No. 1 Cress, NE cor. sec. 13-11-17w. W.O.C. 346 ft.

Lario O. & G. Co. et al No. 1 Marshall, NW SE NE sec. 36-11-18w. U.R. 1,371 ft.

Murphy Oil Co. No. 1 Wiesner, SE SE SW sec. 12-14-19w. Loc.

Phailhan Oil Co. No. 1 Gerstner, SW SW SE sec. 24-14-17w. S.D. 3,350 ft.

Simar Oil Co. et al No. 1 Leiker, NW NW SE sec. 12-15-18w. Drlg. 280 ft.

Twin Drlg. Co. et al No. 1 Schmidt, SW SW SE sec. 22-15-17w. Anhydrite 1,100 ft.; drlg. 3,309 ft.

Vickers Pet. Co. No. 1 Kraus, SW SW NW sec. 22-14-19w. Anhy. 1,390 ft.; Oswald 3,420 ft.; Siliceous 3,735 ft.; sand 3-737-40 ft.; T.D.; pot. prod. 259 bbls. in 24 hrs., down 4 hrs.

Ralph Wixson et al No. 1 Gorham Estate, NW NW SW sec. 35-15-16w. R.U.

Wolf Creek Oil Co. et al No. 1 Polifka, SW SW NE sec. 24-13-18w. U.R. 1,400 ft.

Ellsworth County

Carter Oil Co. et al No. 1 Kruse, C S½ S½ NE sec. 31-17-8w. Anhydrite 430 ft.; Topeka 2,465 ft.; Siliceous 3,384 ft.; cored to 3,392 ft.; showing sulfur wtr.; D.&A.

Finney County

Helmerich & Payne No. 1 Jones, C SE sec. 34-26-34w. Dolomite 2,507 ft.; drlg 2,610 ft.

Graham County

Noah & Young No. 1 Hills, NW SE SE sec. 19-10-21w. Spudded.

Grant County

Columbian Fuel Co. No. 1 Gray, C SE sec. 3-29-35w. Drlg. 575 ft.

Greenwood County

Guy Scott et al No. 1 Pedroja, SE NE SE sec. 6-26-10. Drlg. 1,200 ft.

Harvey County

Harburney Oil Co. No. 1 Schrag, NW NW SE sec. 24-22-3w. S.D. 3,110 ft.

Haskell County

Helmerich & Payne et al No. 1 Larson, C SE sec. 28-28-32w. Rig.

Kuhn Bros. et al No. 1 Nilson, SW SW SE sec. 21-28-32w. Show of gas 2,702 ft.; wtr. 2,730 ft.; T.D. 2,755 ft.

Kingman County

W. C. McBride, Inc., No. 2-A Wooldridge. SW NE SE sec. 16-27-7w. Drlg. 2,635 ft.

D. R. Lauck et al No. 1 Skilling, C E½ E½ SW sec. 3-27-8w. O.W.D D.; drlg. 4,583 ft.

Lincoln County

Graham et al No. 1 Smiley, NE NW NW sec. 26-10-9w. Rotary rig.

Lyon County

Becker Bros. No. 1 Rossillion, SE SE NE sec. 19-21-11. Set 6-in. csg. 2,025 ft.

Marion County

Barbara Oil Co. No. 1 Hane, NE NE SW sec. 4-18-5. Drlg. 1,735 ft.

Empire Oil & Ref. Co. No. 1 Schmidt, NW NW SE sec. 31-20-2. Drlg. 1,565 ft.

Meade County

Pacific Midwest Oil Co. No. 1 Rexford, NE SE SW sec. 8-20-29w. Rig.

McPherson County

Hawkins et al No. 1 Ritikofer, NE NE SE sec. 2-20-1w. Drlg. 1,295 ft.

Ness County

Continental Oil Co. No. 1 Thompson, C E½ E½ SW sec. 13-18-26w. Siliceous and S.O. 4,446-50 ft.; T.D. 4,527 ft.; water; P.B. 4,492 ft.; acidized; no test.

Newton Dev. Co. No. 1 Tenny, NW NW SE sec. 19-18-25w. S.D. 530 ft.

Sayre Oil Co. et al No. 1 Ryersee, C NE SE sec. 34-18-21w. Loc.

Pawnee County

Kessler & Thier et al No. 1 Gustafson, SW cor. sec. 27-20-16w. Drlg. 2,960 ft.

Simpson Oil Co. et al No. 1 Gates, SW cor. sec. 13-20-16w. Drlg. 1,520 ft.

Pratt County

Indian Territory Illum. Oil Co. and Olson Drlg. Co. No. 1 Bolt, C NW NE sec. 5-29-11w. B.R.

Reno County

Continental Oil Co. and L. H. Wentz No. 1 Snook, NE NW SW sec. 10-22-8w. Siliceous 3,564 ft.; drlg. 3,675 ft.

Foraker et al No. 1 Hiett, SE SW NE sec. 34-24-4w. S.O. 2,874 ft.; T.D. 3,-332 ft.; U.R.

Graham et al No. 1 Miller, NE NE SE sec. 36-25-10w. Cored 4,133-48 ft.

Miller et al No. 1 Detter, NE SE NW sec. 28-22-7w. Drlg. 2,600 ft.

Pryor & Lockhart et al No. 1 Kerr, C NW sec. 23-23-8w. U.R. 2,185 ft.

Clyde Pulse et al No. 1 Payne, SW NW NE sec. 4-22-7w. M.I.M.

Rice County

Allison & Fitzwilliam et al No. 1 Foby, NW SW NW sec. 17-19-7w. Rig.

Buckley No. 1 Bailey, SW SW NW sec. 19-20-6w. B.R.

Charles Petroleum Corp. No. 1 Speck, NW NW SE sec. 29-20-8w. Rig.

W. S. Field et al No. 1 Crawford, SE SE SW sec. 21-19-6w. Drlg. 2,020 ft.

Gulf Oil Corp. No. 1 Steckel, SW cor. sec. 30-19-10w. Set 10-in. csg. 150 ft.

Saco Oil Co. et al No. 1 Haxton Est., NW NW NE sec. 30-19-8w. Anhydrite 315 ft. Drlg. 2,010 ft.

Sage et al No. 1 Patton, SW cor. sec. 5-21-7. Drlg. 2,435 ft.

Shell Pet. Corp. No. 1 Gordon, C W half W half NE sec. 21-21-10w. Siliceous 3,-435 ft.; cg.

Shell Pet. Corp. et al No. 1 Hafermann, C N½ N½ SE sec. 6-19-9w. Siliceous 3,192 ft.; T.D. 3,216 ft.; pumped 937 bbls. in 17¾ hrs.

Shell Pet. Corp. No. 1 Maughlin, NE NW SE sec. 11-20-8w. Siliceous 3,235-38 ft.; 36,500,000 ft. gas at 3,260 ft.; acidized.

Simpson & Noble et al No. 1 Pulliam, C S½ N½ NE sec. 35-19-8w. K.C. L. 3,-846 ft.; Viola 3,189 ft.; Simpson 3,210 ft.; Siliceous 3,279 ft.; T.D. 4,085 ft.; P.B. 3,385 ft.; gas est. 70,000,000 ft.; comp.

John Stark et al No. 1 Doran, NE NE SE sec. 13-19-10w. Rig.

Rooks County

Hartman & Blair et al No. 1 Hall, NW cor. sec. 25-10-17w. Anhydrite 1,322 ft.; drlg. 3,220 ft.

Helmerich & Payne et al No. 1 Bedard, C NE sec. 29-9-19w. Siliceous 3,660 ft.; water 3,682-88 ft.; P.B. to 3,559 ft.; acidized.

L. C. D. Drlg. Co. et al No. 1 Westhusin, C NE SE sec. 11-9-17w. Anhydrite 1,240 ft.; S.D. 2,375 ft.

J. H. Lester No. 1 Methene, SE SE NE sec. 29-10-20w. Drlg. 3,184 ft.

J. A. Shoemake No. 1 Stebbins, NE NE SW sec. 26-7-17w. Anhydrite 1,130 ft.; Oswald, 2,865 ft.; Siliceous, 3,207 ft.; drlg. 3,345 ft.

Rush County

Boyle & Grossman No. 1 Wilson, NE cor. sec. 33-17-19w. Siliceous, 3,989 ft.; water, 4,000-09 ft.; D.&A.

W. E. Skeeles et al No. 1 Grumbein, SW SW NE ssec. 7-16-20w. Cellar.

Russell County

Armer et al No. 1 Maier, NE NW NE sec. 20-15-14w. Anhydrite, 840 ft.; fsg. 2,490 ft.

Braden & McClure No. 1 Herbel, NE NE NW sec. 35-14-14w. Spudded.

Coralena Oil Co. No. 1 L. A. Sellens, NW cor. sec. 17-15-13w. Drlg. 282 ft.

El Dorado Ref. Co. No. 1 Scott, NW NW NE sec. 17-13-13w. R.U.

Hartman & Blair No. 1 Johnston, NW cor. sec. 11-13-14w. Anhydrite 690 ft.; P.B. 1,235 ft.; drlg. 2,575 ft.

Lee & Reser No. 1 Penix, SW SW SE sec. 13-14-13w. Anhydrite 705 ft.; Topeka 2,595 ft.; Oswald 2,939 ft.; Siliceous 3,320 ft.; T.D. 3,435 ft.; D.&A.

R. C. Tarrant No. 1 Williamson, SE SE NW sec. 9-14-14w. Tarkio L. 2,515 ft.; T.D. 2,550 ft.; swabbed 5 B.P.H. and showing of wtr.; acidized with 1,000 gals.; made potential of 243 bbls. of oil.

Saline County

Brouk et al No. 1 Othelander, NE NW SE sec. 10-16-3w. Drlg. 1,040 ft.

Ryan Consolidated Co. & Archer No. 1 Norton, NE cor. sec. 32-14-2w. U.R. 2,-645 ft.

Sedgwick County

D. R. Lauck No. 1 McLean, SW SW SE sec. 1-27-1w. Drlg. 3,060 ft.

Earl Wakefield et al No. 1 Howard, SE SE NE sec. 25-25-2. Cleaning out 2,305 ft.

R. J. Wallace et al No. 1 Scheer, SW cor. sec. 22-27-3w. Rig.

Sheridan County

O. A. Roberts et al No. 1 Carrick, C NW sec. 34-9-27w. Rotary rig.

Stafford County

Indian Terr. Illum. Oil Co. and Empire O. & R. Co. No. 1 Mellies, C N½ N½ NE sec. 6-22-11w. Anhydrite 507 ft.; drlg. 1,180 ft.

Skelly Oil Co. et al No. 1 Kipp, SE SE NE sec. 27-25-14w. Loc.

Stanolind Oil & Gas Co. No. 1 Evans, NW NW SW sec. 3-23-11w. Spudded.

C. H. Lebow et al No. 1 Wolk, SE SW NW sec. 3-21-12w. S.D. 2,325 ft.

Sumner County

Matthews & Derrington No. 1 Berry, NW NW SE sec. 14-35-1. Fsg. 3,775 ft.

Pryor & Lockhart No. 1 McCowen, NE NE SW sec. 18-32-1w. Drlg. 2,355 ft.

Rose Spring Drlg. Co. et al No. 1-A Rutter, C NW NW sec. 21-33-2e. Rig.

E. B. Shawver No. 1 Judd, SW SE NE sec. 3-34-2. Siliceous 3,753-35 ft.; D.&A.

Texas Co. No. 1 Reed, NE SE SE sec. 11-31-1w. Chat 3,664 ft.

D. J. Wilson et al No. 1 Clark, 1,320 ft. from W and 25 ft. from S line of NW sec. 15-35-1w. Wilcox 4,394 ft.; drlg. 4,525 ft.

Trego County

Central Commercial No. 1 Wagg, NW NW SE sec. 17-13-21w. K.C. L. 3,548 ft.; granite 4,562-63 ft.; T.D.; P.B. 3,864 ft.; swbd. 6 bbls. oil per day, and showing water.

J. J. Hall et al No. 1 Deines, SE SE SE sec. 12-13-24w. U.R. 3,882 ft.

R. B. McNeely et al No. 1 Lemke, NW NW SW sec. 7-11-22w. Anhydrite 1,660 (cor.); Topeka 3,170 ft.; Oswald 3,450 ft.; set 7-in. csg. 3,490 ft.

G. M. Piggott, Inc. et al No. 1 Burkett, C SW sec. 15-11-22w. Anhydrite 1,616 ft.; fsg. 2,399 ft.

York State Oil Corp. No. 1 Gugler, SW cor. sec. 36-12-21w. Drlg. 522 ft.

Woodson County

N. C. Dunn No. 1 Dawson, C NW NE sec. 27-26-13. L. 1,505 ft.; T.D. 1,527 ft.; P.B. 1,200 ft.; H.F.O.; no test.

Lewis et al No. 1 Riggs, SW cor. sec. 10-26-14. Drlg. 1,245 ft.

C. L. Sheedy et al No. 1 Fuhlhage, NE NW SW sec. 27-25-14. Set 6-in. csg. 1,431 ft.

OKLAHOMA

Week Ending August 15

NORTHERN OKLAHOMA

Beckham County

Jo-Gail Drlg. Co. No. 1 Gilliland, C NE NE sec. 33-8-26w. Drlg. 2,221 ft.

Cleveland County

Hall-Briscoe, Inc., No. 1 Fant, SW SW NE sec. 27-10-2w. S.D. at 7,511 ft.

Coal County

Carter Oil Co. and Magnolia Pet. Co. No. 1 James, SW NW SW sec. 35-1s-8. Wapanucka 660 ft.; McLish 3,455 ft.; Wilcox 3,773 ft.; T.D. 3,784 ft.; W.O.C.

Carter Oil Co. et al No. 1 Warne, NE NE NW sec. 31-3-9. Rig.

Continental Oil Co. No. 1 Breedlove, NW SW SW sec. 24-1-8. Drlg. 220 ft.

Continental Oil Co. No. 1 King, NE SW NE sec. 26-1-8. Sd. 790-820 ft.; drlg. 3,470 ft.

Continental Oil Co. No. 1 W. Kirby, SW SE SW sec. 23-1-8. Drlg. 220 ft.

W. C. Mitchell No. 1 Quiett, NE NW SW sec. 35-1-8. Wapanucka 1,550 ft.; T.D. 1,900 ft.; bailed to 1,700 ft.; no showing.; S.D.

Shell Pet. Corp. No. 3 Hill, SE SE NW sec. 30-3-10. Hunton 5,280 ft.; Sylvan 5,355 ft.; Viola 5,448 ft.; S.O. 5,640-57 sd. 6,276 ft.; T.D. 6,457 ft.; P.B. 4,270 ft.; bailed dry; est. 75,000 ft. gas; S.D.

Sinclair Prairie Oil Co. No. 1 Culver, NE NE SW sec. 16-1-8. Drlg. 3,898 ft.

Garfield County

Herndon Drlg. Co. etal No. 1 Branson, SW SW SE sec. 23-24-3w. Drlg. 4,780 ft.

Earl McBride et al No. 1 Gage Est., SE SE NW sec. 27-22-3w. S.D. 1,380 ft.: sand 1,360-80 ft.; water.

Stanolind O. & G. Co. et al No. 1 Brunken, SW SW NE sec. 32-23-4w. Top Dense 5,915 ft.; Dolomite 5,935 ft.; first Wilcox 5,975 ft.; second Wilcox 6,033 to 6,168 ft.; Arbuckle 6,319 ft.; T.D. 6,521 ft.; D.&A.

Garvin County

Charles E. Carter et al No. 1 Wood, NW SW SE sec. 5-4-3. O.W.D.D.; sd. 2,973 ft.; Hunton 3,000 ft.; T.D. 3,018 ft.; pumped 168 bbls. oil, 60 bbls. wtr. in 22 hrs.

B. F. Lundy No. 1 Prince, NE NE SE sec 32-1-2w. T.D. 2,208 ft.; recmtg. sur. csg.

C. A. Luttrell et al No. 1 Howell, NW SE NW sec. 34-1-1. T.D. 160 ft.; loc. cleared for rotary tools.

Grady County

John Graham et al No. 1 Castleberry, SW SE NW sec. 8-5-7w. T.D. 580 ft. S.D. for water.

Art Holt et al No. 1 Ramsey, NE SE NE sec. 31-5-8w. Drlg.

Ray Stevens No. 1 Mays, NE cor. sec. 1-3-8w. Drlg. 2,125 ft.

Hughes County

McAdams & Barnes No. 1 Homahte, SW NE NE sec. 1-9-10. Gilcrease 2,630 ft.; P.B. 2,104 ft.; W.O.C.

McAdams & Barnes No. 1 Long, SE NE NW sec. 29-9-9. Senora sand 1,730-55 ft. T.D. 2,615 ft. Fsg.

Phillips Pet. Co. No. 1 Eberle, NE NE SW sec. 12-5-9 H.F.W. 5,610 ft. Dolomite 5,598 ft.; Wilcox 5,648 ft.; second Wilcox 5,732 ft.; T.D. 5,744 ft.; H.F.W. and P.B.

Sinclair Prairie Oil Co. et al No. 1 Wilkly, SW cor. sec. 23-9-8. Calvin 1,505 ft.; Cromwell 3,508 ft.; T.D. 3,549 ft.

Rvalls et al No. 1 Montgomery, NW SW NW sec. 7-9-9. Booch 2,950 ft.; Gilcrease 3,100 ft.; Wapanucka 3,470 ft.; Cromwell 3,497 ft.; T.D. 3,498 ft.; S.D.

Kay County

W. O. Allen No. 1 Fulton, SE cor. sec. 18-27-4. Drlg. 1,915 ft.

Denver Prod. & Ref. Co. No. 1 School, SE NW NE sec. 13-26-1w. Drlg. 2,230 ft.

Robert Wilson et al No. 1 Dickerson, NE NE SW sec. 20-29-1w. Drlg. 975 ft.

Kiowa County

S. A. De Bolt et al No. 1 Burnett, NW SE NE sec. 30-7-20w. Pits.

Sandershot & Wilson No. 1 Parrish, SE SE NW sec. 3-6-15w. T.D. 290 ft.; S.D.

Pendleton & Vaughn No. 1 Hobb, SE NW SW sec. 7-6-16w. Drlg. 417 ft.

Travis & Scott No. 1 Doyle, NE SE SW sec. 21-5-17w. Drlg. 579 ft.

Westbrook & Likeing No. 1 Aetna Life Ins. Co., NE SE SE sec. 10-5-16w. T.D. 495 ft.; S.D.

Le Flore County

McCraw et al No. 1 Tidwell, C NW SE sec. 17-3-22. Pull 10-in. csg.; T.D. 1,-890 ft.; rerun 10-in. csg.

Lincoln County

Amerada Petroleum Corp. et al No. 1 Zimmerman, SW SW NE sec. 10-12-5. Pumped 178 bbls. oil and 300 bbls. wtr. in 24 hrs.; comp.

Mid-Continent Pet. Corp. and Texas Co No. 1 Hillman, SW SE NE sec. 29-13-6. T.D. 4,449 ft.; P.B. 4,448 ft.; acidized; no results; D.&A.

Skelly Oil Co. No. 1 Sporn, NW NE SW sec. 21-17-3. T.D. 4,221 ft.; fsg.

Logan County

Helmerich & Payne et al No. 1 Hasler, NW NW SE sec. 14-16-4w. Rig.

McIntosh County

S. E. Dieckman No. 1 K. McIntosh, SE cor. sec. 4-12-17. S.D. at 1,000 ft.

Stanolind Oil & Gas Co. et al No. 1 Tiger, NW NW SW sec. 13-9-15. Bldg. rig.

Noble County

Stanolind O. & G. Co. and Amerada Pet. Corp. No. 1 Gilliam, NE SE SE sec. 14-22-1. First Wilcox 4,636-51 ft.; second Wilcox 4,656-69 ft.; T.D.; P.B. 4,651 ft.; testing.

Payne County

R. L. Kemp and Continental Oil Co. No. 1 Lobaus, NW SW NW sec. 21-17-5. First Wilcox 4,007-20 ft., gas and spray oil; second Wilcox 4,036 ft.; T.D. 4,038 ft., wtr.; P.B. 4,035 ft.; est. 3,000,000 ft. gas; S.D.

Osage County

Chavalier & Simon No. 1 Osage, SE cor sec. 24-23-9. R.U. and S.D.

Gray & Folson No. 1 Osage, SW SW NE sec. 33-25-7. Wilcox 2,948 ft. S.D. 3,052 ft.

Norbia Oil Co. No. 1 Osage, NE NE SW sec. 13-23-6. Loc.

Stoner & Miller No. 1 Osage, NW NE SW sec. 18-22-8. Drlg. 2,775 ft.

Pittsburg County

Okla. Dist. Oil Co. No. 1 Beeler, NE NE SW sec. 7-7-14. Fsg. 2,825 ft.

Pottawatomie County

Carter Oil Co. No. 1 Warne, NE NE NW sec. 31-3-9. Digging cellar.

J. L. Shaw No. 1 Illinois Life, NW SE NW sec. 1-4-5. Drlg. 1,590 ft.

Seminole County

Deaner & Tilley et al No. 1 Wilson, SE SW SW sec. 29-7-6. T.D. 4,723½ ft. S.D.O.

Felmlee & Nichaelson No. 1 Belford, SE NW NE sec. 15-9-8. Sd. 1,460-1,505 ft.; S.O.&G.; S.D. 1,680 ft.

H. E. Kennedy No. 1 Bowlegs, NW NW SE sec. 3-8-7. Loc.

Rudco O. & G. Co. No. 1-A Butner, NE NE SW sec. 15-9-8. Sd. 1,638-56 ft.; H. F.W.; U.R.

Tom Phillips & Kinrow Drlg. Co. No. 1 Cheparney, SE SE NW sec. 7-6-7. T.D. 4,085 ft.; P.B. 2,239 ft.; shot 2,232-39 ft.; 600 ft. wtr. in hole; S.S.O.

Vierson, Haynes & Reynolds Drlg. Co. No. 1-A Carolina, SE SW NE sec. 4-6-7. Drlg. 535 ft.

Texas County

Allison & Barnhill No. 1 Bingley, SW SW NE sec. 30-2n-18. Drlg. 310 ft.

Washita County

L. P. McWhirter No. 1 fee, SW cor. sec. 34-8n-19w. T.D. 1,497 ft.; S.D.

SOUTHERN OKLAHOMA

Atoka County

Phelps & Coats et al No. 1 Fidelity Life Ins. Co., SE SW NW sec. 23-1s-12. T.D. 750 ft.; S.D. for casing.

Prairie Investment Co. No. 1 A. Cobb, SW NE NW sec. 19-3s-11e. Viola 30 ft.; S.D. 710 ft.

Carter County

Carter Oil Co. et al No. 1 Leon Voorhees, C SE SW sec. 34-5s-2w. Drlg. 8,024 ft.

W. E. Hammond No. 1 J. Rile, SW SE SE sec. 8-5s-1e. T.D. 553 ft.; S.D.

Texas Co. et al No. 1-B Cathey, SE NE NE sec. 6-5s-1w. O.W.D.D.; sd. 4,354-55 ft.; T.D.; hole filled 1,000 ft. with oil in 4 hrs. 30 mins.

Comanche County

William Davis No. 1 Aetna Life Ins. Co.. NE cor. sec. 22-2-15w. T.D. 160 ft. in shale; S.D.

Cotton County

English Drlg. Co. No. 1 Wilson, NW NW SE sec. 7-4s-11w. T. D. 1,514 ft.; S.D.

Harmon County

Lioalko Trust, Ltd. No. 1 Crosnoe, SE SE SW sec. 14-3n-25w. T.D. 2,870 ft.. S.D. for D.P.

Jackson County

C. P. Burnham No. 1 Oliver, NW NW SE sec. 26-1-20w. Granite Wash 1,912 ft.; S.O.; T.D. 2,260 ft.; S.D.

A. H. Jackman No. 1 fee, SW cor. sec. 27-1s-24w. R.U.R.

Jefferson County

A. T. Campbell No. 1 Trout, SE NE NE sec. 6-8s-7w. Sd. 1,525-57 ft.; T. D. 2,212 ft.; fsg.

Pearson et al No. 1 Douthitt, NE cor. sec. 24-6s-9w. Drlg. 2,991 ft.

Johnston County

Equitable O. & G. Co. No. 1 Bellsey, NE SW sec. 13-2s-4e. Arbuckle L. 1,552 ft.: drlg. 1,938 ft. in L.

Patton et al No. 1 McCrummens, SW SW NE sec. 16-1s-6. T.D. 260 ft. S.D.

Love County

Amerada Pet. Corp. No. 1-A Westheimer & Daube, SW SE SW sec. 27-6s-2e. T.D. 7,363 ft.; P.B. 2,970 ft.; perforated csg. at 1,539-99 ft. and 2,095-2,115 ft.; cmtd. perforation; S.D.O.

W. H. Riddle et al No. 1 Johnson, C SW SE cor. sec. 20-8s-2w. Drlg. 3,490 ft.

Sinclair Prairie Oil Co. No. 1 Stockton SE SE SW sec. 26-6s-2w. T.D. 8,583 ft.; swbg.

Marshall County

Tom Allen No. 1 Johnson, NW NW SE sec. 14-5s-5e. Drlg. 710 ft.

Helmerich & Payne No. 1 Taliaferro, NW SE SW sec. 26-5s-5e. Drlg. 4,160 ft.

McCurtain County

Louis Sikes No. 1 Mitchell, C NW SW sec. 12-9s-26e. Drlg. 2,200 ft.

Murray County

Power Oil Co. No. 1, C SW NE sec. 10-1s-2e. Loc.

Pushmataha County

C. W. Whitehead et al No. 1 Misser, SE SW SW sec. 35-3s-18e. T.A.; T.D. 1,-660 ft.

Stephens County

W. J. Endicott et al No. 1 McFatridge NW NW SW sec. 11-3s-9w. T.D. 1,515 ft. S.D.

T. H. McCasland et al No. 1 Hildebrand, SW SE NE sec. 1-3s-7w. O.W.D.D.; T.D. 3,003 ft.; drlg. 3,190 ft.

Ed Parson No. 1 Olson, C SW SW sec. 21-2n-8w. Location.

Tillman County

Rochelle Bernheimer No. 1 Tate, NE NE NW sec. 16-1s-19w. T.D. 2,685 ft. S.D. for csg.

Gulf Oil Corp. et al No. 1 McWilliams, NW SW SW sec. 15-3s-17w. T.D. 5,805 ft.; D.&A.

Gulf Oil Corp. No. 1 Wearmouth, SE NW SE sec. 31-1s-18w. T.D. 5,127 ft.; S.D.O.

Johnson, Young & Mitchell No. 1 Donahoe, SW NW NW sec. 7-4s-17w. T.D. 3,-200 ft.; S.D.; contract depth.

Lynn Oliver No. 1 Rilling, SE SE NW sec. 22-1s-15w. Granite Wash 775 ft. T.D. 1,000 ft.; S.D.O.

Shirley, Clum et al No. 1 Moricle, NW NW SE sec. 16-4s-14w. T.D. 1,331 ft.; S.D.

D. S. Smith No. 1-A Hammill, NE NE NW NW sec. 6-5s-15w. T.D. 2,425 ft. Fsg.

ARKANSAS

Bradley County

Phillips Pet. Co. No. 1 C. H. Murphy et al. NW cor. NW NW sec. 12-17-11 T.D. 5,303 ft.; rmg. to bottom after cg. hd. L.

Cleveland County

A. B. Diffie No. 1 L. C. Ross, 330 ft. S and W, NE cor. SW NE sec. 11-11-11. 12-in. cmtd. 101 ft.; W.O.C.S.

J. R. Lockhart No. 1 Ida Robinson, 450 ft. N, 250 ft. W, SE cor. sec. 36-10-11w. Drk.

R. L. Saxon No. 1 Tipton, SE cor. SW NE sec. 13-11-12. Drk.

Columbia County

J. C. Buckbee No. 1 Wilson, sec. 17-17-18. T.D. 4,510 ft.; D.&A.

Eastern Tex Prod. Co. No. 1 Kendrick, 330 ft. S and E, NW cor. SE¼ sec. 7-19-18. M.I.M.

Dallas County

Kel-Mac Lsg. & Royalty Co. No. 1 Owens, sec. 26-10-16. Bailing to test; T.D. 1,-485 ft.

Hempstead County

Easton et al No. 2 Conway-Tiller, 330 ft. N and E, SW cor. SW sec. 34-12-27. M.I.R.

LaFayette County

A. M. Neeley No. 1 Meek, 330 ft. S and W, NE cor. NE NW sec. 35-19-25. R.U.

Little River County

M. E. Sanderson No. 1 Punning, sec. 6-13-20. 10-in. cmtd. 168 ft.; W.O.C.S.

Loanoke County

J. F. Russell No. 1 J. T. Gunter, 444 ft. N, 577 ft. W, SE cor. sec. 17-5n-10w. Drk.

Miller County

McClanahan et al No. 1 Miller Ld. & Lbr. Co., SW cor. sec. 2-18s-28w. Drlg. 3,-070 ft.

Odell Hinson No. 1 Montana Realty Co. 330 ft. S and W NE NW NW sec. 3-17-28. S.D. 3,270 ft.

King Oil Corp. No. 1 G. W. Crank, sec. 19-16-25. T.D. 3,906 ft.; D.&A.

King Oil Co. No. 1 Mann, sec. 2-16-26, T.D. 3,356 ft.; D.&A.

Nevada County

Benedum & Trees No. 1 Groves, C N half SE NW sec. 10-14-20. Drk.

Ouachita County

Carnes & Harrell No. 1 Dunn & Robinson, new loc., 440 ft. S, 440 ft. E, NW cor. NW SE sec. 7-12-19. T.D. 2,415 ft. cor. depth; S.D.; W.O.

Phillips Pet. Co. No. 1 Arnold, 660 ft. S and 330 ft. E, NW cor. NE sec. 27-15-15. Arrng. set 7-in.

Phillips Pet. Co. No. 1 Cheatham, 660 ft N and 330 ft. E, SW cor. NE sec. 27-15-15. Est. 12,000,000 ft. gas, large spray oil; set 8-in. on bottom; T.D. 4,917 ft.

O. F. Whittaker, Tr., No. 1 S. Howard, 600 ft. E and 150 ft. N, SW cor. NW NE sec. 20-12-16. T.D. 2,582 ft.; S.D.

Pulaski County

A. L. Kilselman No. 1 fee, 330 ft. N and W, SE cor. SE SW sec. 2-1s-13w. 13-in. cmt. 102 ft.; S.D. 266 ft.

Union County

Ark.-Southern Oil Co. No. 1 M. H. Simmons, NW cor. NW NE sec. 15-18-18. Drk.

J. C. Buckbee No. 2 Ezzell, SW cor. NE NW sec. 13-17-15. T.D. 6,003 ft.; D.&A.

George W. James No. 2 M. J. Vassor, NW NW SW sec. 12-17-14. Perf. with 10 shots 3,181-84 ft. after P.B. 3,190 ft.; testing.

Marine Oil Co. No. 1 Simmons, 350 ft. S and W, NE cor. SE NW sec. 10-18-13. Drk.

McCressien Oil Co. No. 2 D. Norman, NE cor. NE SE sec. 3-18-13. W.O. jack to pump, 3,556 ft.

Penn-Ark. Corp. No. 1 W. N. Raulston, 330 ft. S and E, NW NW SE sec. 12-17-14. M.I.R.

Phillips Pet. Co. No. 1 Morgan, C Lot 1, S½ sec. 18-18s-17w. Drlg. 1,763 ft.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo-Rodessa

American Lib. Oil Co. No. 2 Norton, 330 ft. N and W, SE cor. NE NE sec. 17-23-15. Rng. csg.; T.D. 6,035 ft.

J. W. Anson No. 1 N. S. Spearman, 330 ft. S and E, NW cor. SE¼ sec. 14-23-16. Loc.

Ark.-La. Gas Co. No. 21 Rodessa O. & Ld. Co., 296 ft. N, 330 ft. E SW cor. sec. 23-23-16. Comp.; flw. 15 B.P.H.; ¼-in. tbg. ck.; T.D. 6,015 ft.

Ark.-La. Gas Co. No. 22 Rodessa O. & Ld. Co., 330 ft. S and 328 ft. W, NE SE NE sec. 23-23-16. Drlg. 5,841 ft.

Ark.-La. Gas Co. No. 23 Rodessa O. & Ld. Co., 330 ft. N and E, SW cor. NW NE sec. 23-23-16. Set 7-in. 6,004 ft.; T.D. 6,029 ft.; W.O.C.S.

Ark.-La. Gas Co. No. 2 Teamer, NW SE SW sec. 13-23-16. Drlg. 3,953 ft.

Blackwell O. & G. No. 3 Neugent, 330 ft. S and W, NE cor. NE SE sec. 8-23-15. Drlg. 4,140 ft.

Blackwell O. & G. No. 1 Wynn, 330 ft. N, 396 ft. E, SW SE NE sec. 8-23-15. Drlg. 1,930 ft.

J. G. Collins No. 1 Caddo School, 2-ac. tr., no line, NW SE sec. 8-23-15. Drlg. 3,-558 ft.

J. Edward Jones No. 1 Rockefellow, Lot 3, Blk. 21, sec. 23-23-16. 13-in. cmtd. 236 ft.; W.O.C.S.

J. Edward Jones No. 1 M. Z. Sharp, 1,227 ft. N, 330 ft. E, SW cor. SE¼ sec. 4-23-16. Drlg.

Lion Oil Ref. Co. No. 2 Wynn, 395 ft. N, 307 ft. E, SW cor. sec. 9-23-15. Drlg. 4,445 ft.

Louisiana Oil Ref. Corp. No. 1 Ratcliff, 330 ft. S and E, NW cor. sec. 16-23-15. Drlg. 4,176 ft.

R. W. Norton No. 4 Atkins Unit, 330 ft. N and 441 ft. E, SW SE sec. 7-23-15. Drlg.

R. W. Norton No. 5 Atkins Unit, 660 ft. S and E, NW NW NE sec. 18-23-16. 7-in. cmtd. 6,000 ft.; T.D. 6,024 ft.

R. W. Norton No. 5 Foscue Unit, sec. 23-23-16. Drlg. 5,136 ft.

R. W. Norton No. 6 Foscue Unit, 656 ft. N and W, SE cor. of Foscue tract, sec 20-23-16. T.D. 6,000 ft.; rng. 7-in.

R. W. Norton No. 7-A Caddo Levee Board, 330 ft. S, 1,980 ft. W, NE cor. sec. 28-23-16. Comp.; flw. 22 B.P.H.; 3/32-in. tbg. ck.; T.D. 5,973 ft.

R. W. Norton No. 3 Slattery, 1,990 ft. S, 656 ft. E, NW cor. sec. 28-23-16. Comp.; flw. 9 B.P.H.; ⅛-in. tbg. ck.; T.D. 6,000 ft.

R. W. Norton No. 5 Tyson heirs, 1,155 ft. N, 165 ft. W, SE cor. NW¼ sec. 13-23-16. Comp.; flw. 11 B.P.H.; 3/16-in. tbg. ck.; T.D. 6,049 ft.

Magnolia No. 3 N. S. Spearman, 1,013 ft. S, 704 ft. E, NW cor. SW sec. 18-23-15. Loc.

McAlester Fuel Co. No. 2 N. S. Tyson, 100 ft. N, 150 ft. W, C sec. 22-23-16. Loc.

Phillips Pet. Co. No. 4 Adams, 330 ft. N and W, SE NE NW sec. 17-23-15. Drlg. 3,400 ft.

Phillips Pet. Co. No. 1 Innerstate Ld. & Royalty Co., 330 ft. S and E, NW cor. NE NW sec. 16-23-15. Drlg. 5,176 ft.

Phillips No. 1 Cora Woods, 330 ft. S and W, NE cor. W 60 ac., N½ NE¼ sec. 17-23-15. Cg. 6,010 ft.

Phillips No. 2 Cora Woods, 330 ft. N and E, SW cor. N½ NE sec. 17-23-15. Drlg. 2,371 ft.

Phillips No. 3 Cora Woods, 330 ft. N and E, SW cor. NE NE sec. 17-23-15. Drlg. 1,605 ft.

Pyramid O. & G. No. 1 R. G. Fitts, 330 ft. N, 132 ft. E, SW cor. SE NE sec. 8-23-15. Loc.

Pyramid O. & G. No. 2 R. G. Fitts, 330 ft. S, 132 ft. E, NW cor. SE NE sec. 8-23-15. Loc.

Red Iron Drlg. Co. No. 1 Means, 330 ft. N and E, C sec. 9-23-15. Set 16-in. 225 ft.; W.O.C.S.

Reinke et al No. 1 Fitts, 363 ft. S, 1,308 ft. E, NW cor. SW NW sec. 23-23-16. Drlg. 5,152 ft.

Snowden & Anding No 1 Taylor, C Lot 7, Blk. 46, townsite, sec. 23-23-16. T.D. 5,955 ft.; acid 3,000 gals.

Standard Oil Co. No. 6 J. Caldwell, 330 ft. N and E, SW NE SE sec. 13-23-16. Drlg. 5,566 ft.

Standard Oil Co. No. 7 J. Caldwell, 610 ft. N, 660 ft. W, SE sec. 23-23-16. Drlg. 4,005 ft.

Tharpe et al No. 1 Tyson, 180 ft. N, 330 ft. W, C sec. 22-23-16. Drlg. 4,432 ft.

Tri State O. & G. Co. No. 2 Hall, Lot 12, Blk. 29, sec. 23-23-16. Set 7-in. 5,983 ft.

United Gas No. 2 Lindsay Maround Unit, 133 ft. S and W NE NW NW sec. 24-23-16. Comp.; flw. 15 B.P.H.; ¼-in. tbg. ck.; T.D. 6,080 ft.

United Gas No. 2 L. Gibson est., sec. 15-23-16. Drlg.

United Gas No. 3 L. Gibson est., sec. 15-23-16. Drlg. 1,529 ft.

United Gas No. 1 Teamer, 133 ft. S, 111 ft. E, NW NE NW sec. 24-23-16. Comp.; 44 B.P.H.; ⅛-in. tbg. ck.; T.D. 6,060 ft.

United Gas No. 7 Thomas Unit, sec. 23-23-16. 7-in. cmtd. 5,058 ft.; T.D. 6,010 ft.

United Gas No. 8 Thomas Unit, Blk. 1, sec. 23-23-16. Comp.; flw. 38 B.P.H.; ¼-in. tbg. ck.; T.D. 6,020 ft.

United Gas No. 9 Thomas Unit, 330 ft. N and 332 ft. W, SE cor. NE NW sec. 23-23-16. 10-in. cmt. 2,185 ft.; W.O.C.S.

United Gas No. 574-1 fee, 660 ft. N and W, SE cor. sec. 16-23-16. Rmg.; T.D. 5,981 ft.

United Gas No. 3 Young, 612 ft. N, 655 ft. W, SE cor. sec. 21-23-16. Rng. 7-in.; T.D. 6,000 ft.

N. LOUISIANA WILDCATS

Bienville Parish

DeSoto O. & G. Co. No. 1 Dunn and Olsen, C N½ NW¼ sec. 15-16-10. R.U.

J. W. Leonard No. 1 Courtney, 330 ft. N and W, SE cor. sec. 5-17-7w. Cg. 5,392 ft.

Bossier Parish

Geo. H. Bringhurst et al No. 2 Buckley, 1,000 ft. N, 330 ft. W, SE cor. sec. 35-21-13. Drlg. 1,410 ft.

Premier Inv. Co. No. 23, N½ NW¼ sec. 14-19-11. T.D. 425 ft.; pmpd. 75 B.P.D.; comp.

Premier Inv. Co. No. 4 Weaver, 165 ft. S of No. 2, sec. 14-19-11. Loc.

Premier Inv. Co. No. 25 Wyche, SW cor. NW¼ sec. 14-19-11. Loc.

Producers O. & G. Co. No. 1 Webb, C W½ SW sec. 22-17-12. Comp.; T.D. 5,323 ft.; D.&A.

Tidwell et al No. 1 Nattin, 200 ft. S and W, C sec. 15-22-14. Cg. 2,919 ft.

Triangle Drlg. Co. No. 1-E Skannal, 660 ft. N and 2,640 ft. W, SE cor. sec. 23-17-12. T.D. 5,172 ft.; D.S.T. 25,000,000 ft. gas.

United Gas No. 1-F H. L. Skannal, 660 ft. S, 2,640 ft. W, NE cor. sec. 26-17-12. 13-in. cmtd. 315 ft.; W.O.C.S.

Caddo Parish

S. Bender No. 2 Starr, SW SW sec. 26-20-16. W.O.S.R.; T.D. 2,365 ft.; 500 ft. oil.

Calatex O. & G. Co. No. 3 Scott, 1,038 ft. W, 307 ft. N, SE cor. sec. 5-16-16. P.B. to 2,460 ft.; W.O.C.S.

Calatex O. & G. Co. No. 1 Whitworth, 770 ft. S, 860 ft. E, NW cor. SW¼ sec. 10-16-16. Drlg. 1,814 ft.

W. D. Chew No. 1 Spell, SW cor. SE SW sec. 29-21-15. Drlg. 1,810 ft.

Falcon Oil Co. No. 1 J. E. Cupples, 500 ft. S and 350 ft. W, NE cor. sec. 24-16-13. Drlg. 3,522 ft.

Flake & Henry No. 1 Rogers, SW NW SW sec. 11-20-15. Drlg.

Gulf Ref. Co. No. 1 E. P. Hatcher, 660 ft. N and E, SW cor. SE¼ sec. 11-17-15. Cmtd. 10-in. 2,589 ft.; W.O.C.S.

J. B. Hutchinson No. 2 Storey-Phillips, SW cor. NE NW sec. 28-16-13. Drlg. 1,050 ft.

Innerstate Drlg. Co. No. 1 E. Smith, SW SE SW sec. 35-21-15. Drlg. 795 ft.

Juan et al No. 1 P. Hobbs, SE cor. NW NW sec. 28-21-15. R.U.

Leonard Co. No. 1 Sport Oil Co., sec. 4-20-15. Comp.; pmpd. 5 B.P.D.; T.D. 2,190 ft.

Maja Oil Co. No. 1 Mathew, NE SE sec. 10-20-15. Drlg. 450 ft.

Bill Morefield et al No. 1 Stokely, 745 ft. S and 100 ft. E, C sec. 5-20-16. T.D. 955 ft.; W.O.S.R.

Prairie River Synd. No. 1 Hutchinson, 330 ft. N and E, SW NW sec. 15-15-12. Drlg. 5,326 ft.

Simplex Oil Co. No. 4 Natalie, 200 ft. N, 250 ft. W, SE NW SE sec. 10-20-15. Comp.; pmpd. 190 B.P.D.; T.D. 2,206 ft.

Sport Oil Corp. No. 1-D Muslow, SE cor. sec. 5-20-15. Rmg. to make D.S.T.; T.D. 4,820 ft.

Stanolind O. & G. Co. No. 105 Dillon hrs., NE cor. sec. 14-21-15. Comp.; pmpd. 65 B.P.D.; T.D. 1,736 ft.

Stanolind O. & G. Co. No. 106 Dillon hrs., NE cor. sec. 14-21-15. Cmtd. 6-in. 1,490 ft.; W.O.C.S.

United Gas No. 1-A S. R. Wheeler, 1,320 ft. S, 1,500 ft. W, NE cor. sec. 16-18-16. Comp.; 3,000,000 ft. gas; open tbg.; 2,260 lbs. R.P.; T.D. 5,911 ft.

Caldwell Parish

Crickett & Woods No. 1 fee, NW SE NE sec. 18-11-3. Drlg. 940 ft.

Claiborne Parish

S. E. Langford et al No. 1 White, cen. S½ NE SW sec. 26-21-8. S.D. 512 ft. for wtr.

F. T. Oakes No. 1 H. W. Patton, NE cor. sec. 1-20-5. S.D. 4,511 ft.; W.O.

United Gas Public Service Co. No. 2 Durfett, 660 ft. N and 1,980 ft. E, SW cor. sec. 31-20-5. Cg. sd. 8,404 ft.

De Soto Parish

J. W. Adams No. 1 Jenkins Est., 241 ft. W, 274 ft. S, NE cor. sec. 3-12-12. S.D. 1,498 ft.; wtr.

J. E. Carlson No. 1 A. P. Garland, 250 ft. S and E, NW cor. SW sec. 7-14-14. Fsg. 2,010 ft.

Jal Drlg. Co. No. 8-A Scales, 1,370 ft. N, 110 ft. E, SW cor. sec. 36-13-12. 10-in. cmtd. 40 ft.; W.O.C.S.

R. Kamon No. 1 Roscoe, SE NW sec. 14-12-13. Drlg.

R. C. Payne No. 1 Harris, sec. 11-13-14. Fsg. D.P.; T.D. 3,200 ft.

Union Pet. Co. No. 1 Hill, sec. 3-10-13. O.W.D.D.; drlg. 3,023 ft.

Grant Parish

Acadian Prod. Corp. B-2 Swope, 330 ft. S of No. 7, Cmt. 6-in.; T.D. 1,607 ft.; W.O.S.R.

Perry et al No. 1 Barrett, 150 ft. N and W, SE NE SE sec. 17-9-1e. Cmt. 6-in.; W.O.C.S.

W. B. Rhineck, Tr., No. 1 Swope, SW cor. NW SW sec. 16-9-1e. Comp.; pmpd. 5 B.P.D.; T.D. 1,601 ft.

Rogers Oil Co. No. 1 Swope, SW NW SW sec. 17-9-1. R.U.

Theo Davis et al No. 1 Barrett, NE cor. S½ SW NE sec. 19-9-1e. Drlg. 1,530 ft.

Franklin Parish

S. C. Jensen No. 1 Dailey, sec. 12-11-6. S.D. 1,808 ft.; wtr.

La Salle Parish

H. L. Hunt No. 2 La. Cen. Lbr. Co., SE SE SW sec. 26-10-4. Drlg. 821 ft.

Morehouse Parish

J. B. Collins et al No. 1 E. M. Clarke, SE NE sec. 10-20-7e. Drlg. 2,665 ft.

J. E. Farrell No. 26 State, 2,053 ft. S, 986 ft. E, NW cor. sec. 20-22-4e. Cmtd. 6-in. 2,688 ft.; W.O.C.S.

J. E. Farrell No. 31 State, SW cor. sec. 20-4-3e. R.U.

J. E. Ferrell No. 34 State, SE cor. sec. 14-20-4e. R.U.

United Carbon Co. No. 5 Stovall, NE SE sec. 4-20-4. R.U.

United Gas No. 40 Crossett, NW cor. sec. 30-22-5e. Tstg.

United No. 41 Crossett, SW cor. sec. 18-21-5. Set 8-in. 2,177 ft.; W.O.C.S.

United Gas No. 42 Crossett, SE cor. sec. 25-22-4e. Loc.

United Gas Co. No. 43 Crossett, SW cor. sec. 30-22-5e. Loc.

United Gas Co. No. 44 Crossett, SE cor. sec. 24-22-5e. Loc.

Natchitoches Parish

Ivan A. Allen No. 1 Simpson, sec. 12-7n-7w. Drlg.

C. D. Morrison No. 1 Moffitt, 250 ft. N, 250 ft. W, SE cor. sec. 19-10-10. 10-in. set 110 ft.; W.O.C.S.

Union Pet. Co. No. 2 DeBlieux, 2,395 ft. E, 150 ft. S of W cor. sec. 33-10-7w. S.D. 2,544 ft.

Ouachita Parish

Innerstate Nat'l Gas Co. No. 49 fee, 2,987 ft. W, 210 ft. N, NE cor. sec. 45-19-3e. Cmt. 8-in. 2,193 ft.

Red River Parish

Bird Oil Co. No. 1 F. H. King, 220 ft. N and E, SW cor. NW NE sec. 34-13-11. Drlg.

Byrd Explo. Co. No. 1 Waller, 1,570 ft. N and 1,520 ft. W, SE cor. sec. 30-13-11w. 6-in. csg.; W.O.; T.D. 2,456 ft.

Richland Parish

Gulf Ref. Co. No. 15 R. R. Rhymes et al, sec. 32-17-6e. Drlg. 4,132 ft.

J. S. Morrisey No. 1 Jones, 1,293 ft. N, 636 ft. E, SW cor. sec. 15-18-7e. Drlg. 2,584 ft.

Arthur Wray No. 1 C. E. Slocum, NE cor. sec. 10-17-6. Rmg. to bottom 2,712 ft.

Sabine Parish

M. C. Forsman No. 1 Patrick, NE SW sec. 21-9-13. T.D. 1,690 ft.; tested dry; W.O.

F. G. Cox No. 1 Whitney Corp., C NW NE sec. 3-9-13. Drlg. 5,100 ft.

Pearl Oil Co. No. 6 Crawford, C SE SE sec. 20-9-13. Drlg. out plug to 3,014 ft.

J. R. Keen No. 1 Long Bell, 276 ft. N and 288 ft. W, SE cor. NE SW sec. 5-18-13. T.D. 2,069 ft.; well acidize.

O. S. McKnelly No. 3 Henderson, sec. 29-9-13. Acid; T.D. 1,701 ft.; tstg.

Claude A. Smith No. 1 Whitney Corp., NE cor. sec. 19-10-13. T.D. 3,500 ft.; W.O. C.S. 5-in.

A. H. Tarver No. 2 Baker, NW cor. NE sec. 36-8-12. Drlg. 5,120 ft.

Tensas Parish

H. M. Jones et al No. 1 Chicago Mill & Lbr. Co., NE cor. sec. 30-12-10e. T.D. 882 ft.; S.D.; W.O.

H. M. Jones et al No. 1 fee, SE SE 32-12-10e. T.D. 650 ft.; S.D.

Union Parish

Federal Pet. Co. No. 1 fee, 330 ft. S and W, NE cor. sec. 34-21-3e. Drlg. 5,551 ft.

Federal Pet. Co. No. 2 fee, 330 ft. S and W, NE cor. sec. 5-19-3e. Drlg. 4,061 ft.

Innerstate Natl. Gas Co. No. 48 fee, SE sec. 27-20-3e. Comp.; 3,750,000 ft. gas; 995 lbs. R.P.; T.D. 2,175 ft.

Innerstate Natl. Gas Co. No. 50 fee, SE cor. sec. 29-21-4. 12-in. cmtd. 180 ft.; W.O.C.S.

Innerstate Natl. Gas Co. No. 51 fee, SE cor. sec. 25-21-3. 12-in. cmt. 196 ft.; W. O.C.S.

Innerstate Natl. Gas Co. No. 52 fee, SE cor. sec. 32-21-4e. Loc.

Nemours Corp. No. 1 Haile, 492 ft. W, 231 ft. N, SE cor. SW¼ sec. 3-21-4e. 10-in. cmtd. 190 ft.; W.O.C.S.

So. Carbon Co. No. 11 Grayling, 1,320 ft. S, 1,840 ft. E, NW cor. sec. 9-21-4e. Set 6-in. 2,080 ft.; W.O.C.S.

So. Carbon Co. No. 69 fee, 660 ft. S and E, NW cor. sec. 9-21-4e. Drlg.

Webster Parish

W. D. Ambrose No. 1 T. Crichton, 330 ft. N and E, SW cor. SW NW sec. 36-18-9. Drlg. 4,315 ft.

J. P. Evans No. 1 Johnson, 501 ft. N, 200 ft. E, SW cor. NW SW sec. 36-18-9. Drlg. 4,863 ft.

Red Hawk Oil Co. No. 1 Mayfield, sec. 9-23-9. 10-in. set 90 ft.; W.O.C.S.

O[illegible] Oil Co. No. 1 R. L. Holloway, [illegible] ft. S, 760 ft. W, C sec. 23-21-10. Cg. 8,530 ft.

L. R. Skidmore No. 1 Barnett, sec. 29-17-9. S.D. for wtr. 1,026 ft.

West Carrol Parish

Lahman & Insley No. 1 C. H. Neely, 330 ft. N and W, SE cor. SE SW sec. 19-20-11e. T.D. 750 ft.; S.D.

SOUTH LOUISIANA FIELDS

Bay St. Elaine—Terrebonne Parish

Texas Co. No. 12 State-Bay St. Elaine, sec. 20-22s-18e. Drlg. sh. 7,135 ft.

Black Bayou—Cameron Parish

Shell Pet. Corp. No. 34 Watkins, sec. 7-12s-12w. T.D. 5,165 ft.; swbd. 152 bbls. oil per day.

Shell Pet. Corp. No. 35 Watkins, sec. 8-12s-12w. Drlg.

Caillou Island—Terrebonne Parish

Texas Co. No. 37 State, 1,492 ft. N, 362 ft. W, SE cor. sec. 13-23s-20e. 13⅜-in. csg. 1,300 ft.; T.D. 3,788 ft.; P.B. 3,000 ft.; T.D. 4,045 ft.; P.B. 2,992 ft.; W.O.C.

Cameron Meadows—Cameron Parish

Burton Sutton No. 14 School Land, sec. 16-14s-12w. Drlg.

Humble-Magnolia No. 17 Cameron Meadows, sec. 21-14s-13w. T.D. 5,115 ft.; P.B. 4,200 ft.; sdtkd.; fsg. 4,315 ft.; cutting stuck drill stem.

Darrow—Ascension Parish

Humble O. & R. Co. No. 4 Community, sec. 33-10s-2e. Drlg.

Fausse Point—Iberia Parish

Texas Co. No. 2 State, sec. 35-11s-8e. Drlg. sh. 4,813 ft.

Four Isle—Terrebonne Parish

Texas Co. No. 7 State, sec. 14-21s-6e. Drlg. 2,100 ft.

Garden Island—Plaquemines

Texas Co. No. 19 Garden Isle, sec. 37-22s-33e. T.D. 4,933 ft.; P.B. and S.T.; salt 4,953 ft.; no report.

Gillis—Calcasieu Parish

Fohs Oil Co. No. 2 Airhart, sec. 14-9s-8w. Drlg. sh. 5,938 ft.

Fohs Oil Co. No. 3 Wasey, sec. 14-9s-8w. Drlg. sh. 2,534 ft.

Texas Co. No. 11 Nickerson, sec. 11-9s-8w. Spudded.

Union Sulphur Co. No. 8 Barbe, sec. 11-9s-8w. Drlg. sh. and L. 3,370 ft.

Union Sulphur Co. No. 9 Barbe, sec. 1-9s-8w. Drlg.

Union Sulphur Co. No. 9 Powell, sec. 13-9s-8w. Cmtd. surf. csg. 1,353 ft.

Union Sulphur Co. No. 1 Kaufman, sec 13-9s-8w. T.D. 7,075 ft.; oil sd. 7,063-69 ft.; I.P. 500 B.P.D.; ¼-in. ck.

Union Sulphur Co. No. 13 State, sec. 13-9s-8w. Drlg.

Union Sulphur Co. No. 15 State, sec. 13-9s-8w. Drlg.

Hackberry—Cameron Parish

Gulf Oil Corp. No. 21 Irwin, sec. 12-12s-10w. Drlg. sh. and shell 5,612 ft.

Stanolind O. & G. Co. No. 2 Duhon, sec. 22-12s-10w. T.D. 3,199 ft.; tstg.

Stanolind O. & G. Co. No. 23-B Gulf Land, sec. 14-12s-10w. Drlg. sh. 1,215 ft.

Stanolind O. & G. Co. No. 24-B Gulf Ld., sec. 14-12s-10w. R.U.

Stanolind O. & G. Co. No. 2 Portie, sec. 23-12s-10w. Drlg. sh. 432 ft.

Texas Co. No. 21 State, sec. 12-12s-10w. Drlg.

Texas Co. No. 19-B State, sec. 13-12s-9w. Drlg. sh. 7,010 ft.

Jeanette—St. Mary Parish

Herton Oil Co. No. 1 Barrileau, sec. 59-13s-8e. T.D. 8,258 ft.; fsg.

Herton Oil Co. No. 1 State, sec. 40-13s-9e. T.D. 6,681 ft.; oil sd.; 7-in. csg. 6,651 ft.

Bayou Mallet—Acadia Parish

Superior Oil Prod. Co. No. 4 Bradley, sec. 37-7s-1e. Abd. 7,027 ft.

Jennings—Acadia Parish

Stanolind O. & G. Co. No. 16 Houssiere-Latrielle, sec. 47-9s-2w. Drlg. sh. 6,337 ft.

Stanolind O. & G. Co. No. 17 Houssiere-Latrielle, sec. 47-9s-2w. Drlg. sh. 3,223

Superior Oil Prod. Co. No. 1 Leckett, sec. 42-9s-2w. Drlg. sd. and sh. 4,272 ft.

Lafitte—Jefferson Parish

Texas Co. No. 5 Lafitte, sec. 20-17s-24e. Drlg. sh. and L. 8,037 ft.

Texas Co. No. 5 Rigolettes, sec. 29-17s-24e. Drlg. sh. and L. 7,989 ft.

Triangle Oil Co. No. 1 Carroll, sec. 125-12s-11e. Drlg.

Lake Barre—Terrebonne Parish

Texas Co. No. 37 Lake Barre State. T.D. 7,948 ft.; fsg.

Texas Co. No. 38 State, sec. 38-21s-19e. Top salt 1,355 ft.; drlg. salt 2,986 ft.

Lake Hermitage—Plaquemines Parish

[illegible] Oil Corp. No. 5 LaFourche Basin Levee Bd., sec. 11-18s-25e. Drlg. sh. 4,925 ft.

Lake Pelto—Terrebonne Parish

Texas Co. No. 15 State, sec. 17-23s-18e. Drlg. sh. 1,639 ft.

Leesville—LaFourche Parish

Delta Oil Co. No. 1 Constantine, sec. 34-21s-22e. T.D. 5,043 ft.; 7-in. csg. at 5,000 ft.; S.D.

Gulf Oil Corp. No. 11 Allen Land. Drlg. shale.

Texas Co. No. 51 Leesville, sec. 34-21s-22e. Drlg.

Texas Co. No. 52 Leesville, sec. 34-21s-22e. Drlg.

Texas Co. No. 48 Leesville, sec. 27-21s-22e. T.D. 4,377 ft.; P.B. 4,325 ft.; P.B. 3,838 ft.; sdtkd.; drlg. sh. 4,524 ft.

Texas Co. No. 52 Leesville, sec. 27-21s-22e. Drlg.

Texas Co. No. 53 L.L.&E., sec. 34-21s-22e. T.D. 6,053 ft.; rmg.

New Iberia—Iberia Parish

Crysanthon et al No. 1 Gulf fee, sec. 71-12s-7e. Drlg. sh. 3,310 ft.

Wm. Hellis No. 1 Burke, sec. 25-12s-7e. Drlg. sh. 1,530 ft.

Wm. Hellis No. 2 Schwing, sec. 56-12s-7e. Drlg. sh. 2,317 ft.

Texas Co. No. 1 Clementine, sec. 25-12s-7e. R.U.

Texas Co. No. 1 Schwing, 10-in. csg. 1,341 ft.; drlg. sh. 4,412 ft.

Roanoke—Jefferson Davis Parish

Humble O. & R. Co. No. 4-B Devilbiss, sec. 11-9s-4w. Drlg. sh. 8,569 ft.

Port Barre—St. Landry Parish

Pan American Prod. Co. No. 2 Haas Hirsh, sec. 4-6s-5e. Drlg. sdy. sh. 4,725 ft.

St. Martinville—St. Martin Parish

Continental Oil Co. No. 1 fee, sec. 57-11s-6e. 13⅜-in. csg. 1,387 ft.; drlg. sh. 3,640 ft.

Tide Water Oil Co. No. 1 Domengeaux (formerly Coastal Plains Oil Corp.), sec. 57-11s-6e. Drlg. sh. 7,440 ft.

Sorrento—Ascension Parish

Pan American Prod. Co. No. 5 United Lands, sec. 15-10s-4e. T.D. 4,727 ft.; P.B. 4,330 ft.; 7-in. csg. 4,320 ft.; tstd. S.W.; abd.

Sulphur—Calcasieu Parish

Union Sulphur Co. No. 829 fee, sec. 29-9s-10w. P.B. and sdtkd.; drlg. sh. 3,897 ft.

Union Sulphur Co. No. 832 fee, sec. 20-9s-10w. Drlg. sh. 3,212 ft.

Tepetate—Acadia Parish

Continental Oil Co. No. 5-A Homeseekers

Dev. Co. T.D. 8,320 ft.; comp.; but killed to W.O.
Continental Oil Co. No. 6-A Homeseekers Dev. Co., sec. 29-7s-2w. Drk.
Continental Oil Co. No. 1 Houssiere, sec. 33-7s-2w. Abd. 8,626 ft.
Continental Oil Co. No. 2 Klump, sec. 34-7s-2w. Drlg. sh. and L. 8,037 ft.
Continental Oil Co. No. 4-A Welch, sec. 28-7s-2w. T.D. 8,316 ft.; I.P. 156 B.P.D. through 3/16-in. ck.

Vinton—Calcasieu Parish

Vinton Pet. Co. No. 1 fee, sec. 34-10s-12w. Drlg. sh. 4,712 ft.

White Castle—Iberville Parish

Shell Pet. Corp. No. 3 Shingle, 650 ft. S. 400 ft. E of NW cor. sec. 12-11s-12e. T.D. 6,436 ft.; 7-in. csg. 6,406 ft.; drlg. plug.

S. LOUISIANA WILDCATS

Acadia Parish

H. E. Dalton No. 1 Setting, sec. 17-7s-1w. Spd. 30 ft. and S.D.

Allen Parish

Humble O. & R. Co. No. 2 Bell est., 923 ft. N and E, sec. 26-6s-7w. Cg. sh. 8,660 ft.

Avoyelles Parish

Frost Oil Co. No. 1 Hines Lumber Co., sec. 3-3n-4e. Drk.

Calcasieu Parish

Buhler Oil Co. No. 2 Faisst, sec. 26-8s-10w. Old TD. 4,412 ft.; S.D. 3,755 ft.
Union Sulphur Co. No. 1 Wurmost, sec. 9-11s-8w. Prep. to core 7,505 ft.
Magnolia Pet. Co. No. 1 Johnson Bayou Sch. Ld., sec. 16-15-14. Moving in.
Fure Oil Co. No. 1 Mallard Bay, sec. 22-13s-3e. Driving piling.

Cameron Parish

Magnolia Pet. Co. No. 1 Hebert, sec 13-12s-9w. T.D. 9,400 ft.; shooting D.S. at 8,683 ft.; abd.

East Baton Rouge Parish

Cavalier Oil Co. No. 1 Vingnes, sec. 40-8s-2e. T.D. 1,469 ft.; rng. 10-in. csg.; W.O.C.
Cavalier Oil Co. No. 1 Young, sec. 62-4s-1w. Drk.

East Feliciana Parish

East Feliciana Oil No. 1 West & Budding, sec. 37-1s-1w. Spudded 15 ft. and S.D.

Iberia Parish

Jefferson Lake Oil Co. No. 322 State Lake Pigneur. T.D. 5,690 ft.; P.B. 3,000 ft.; S.D. 3,400 ft.
Texas Co. No. 1-B State, Vermillion Bay, sec. 16-15s-6e. Drlg. sd. and sh. 5,849 ft.

Jefferson Davis Parish

Stanolind O. & G. Co. No. 1 C. E. Britt, sec. 15-10s-3w. Cg. sd. 8,620 ft. with odor of oil topped at 8,582 ft.

Livingston Parish

Coastline Oil Co. No. 1 Addison Trust Co., sec. 7-7s-3e. Drk.

Plaquemines Parish

Tide Water Oil Co. No. 1 Manhattan Fruit Co. O.W.D.D.; T.D. 3,510 ft.; R.U. to deepen.

St. Bernard Parish

John Cartwright No. 1 Meraux Nunes, sec. 19-13s-12e. Drlg. sh. 6,218 ft.

St. James Parish

Shell Pet. Corp. No. 1 Colonial Sugar, sec 5-12s-5e. T.D. 7,522 ft.; top salt 7,493 ft.; P.B. 3,316 ft.; S.D.

St. Martin Parish

Texas Co. No. 2 State, sec. 14-10s-9e. T.D. 7,744 ft.; P.B. 6,720 ft.; drlg. sd. and sh. 7,350 ft.
Texas Co. No. 1 Bayou Sale, sec. 23-17s-9e. Drk.

St. Mary Parish

Mike Hogg et al No. 1 Laws Realty Co., Inc., sec. 30-13s-10e. Cg. sd. and sh. odor of oil and gas.

Terrebonne Parish

J. B. Beck et al No. 1 Realty Operators, sec. 103-17s-17e. S.D. 2,033 ft.; (cor.).
Humble O. & R. Co. No. 1 Continental Land & Fur Co., sec. 30-17s-14e. Drlg. sh. 9,031 ft.

Vermilion Parish

Continental Oil Co. No. 1 O. C. Hebert, sec. 20-12s-3e. 7-in. csg. 10,947 ft.; T.D. 11,005 ft.; P.B. to 10,947 ft. to straighten hole.
Delcambre & Shelton No. 1 Delcambre, sec. 63-12s-6e. S.D. 2,708 ft.
Del-Shell Exploration Co. No. 1 Landry hrs., sec. 1-13s-4w. S.D. 2,000 ft.
Louisiana Land & Expl. Co. No. 1 La. Fur Co., sec. 16-15-1e. Bldg. foundations.

TEXAS

Week Ending August 15

GULF COAST FIELDS

Raccoon Bend—Austin County

Humble O. & R. Co. No. 10-X McCasland, Wm. C. White Sur. 10¾-in. csg. 1,131 ft.; drlg. sh. 2,127 ft.
Humble O. & R. Co. No. 9-X Diermar, Wm. C. White Sur. 10¾-in. csg. 1,097 ft.; T.D. 4,090 ft.; 7-in. csg. 4,037 ft.; I.P. 210 B.P.D.; ¼-in. ck.; T.P. 240 lbs.; C.P. 530 lbs.
Humble O. & R. Co. No. 2 Thompson, Wm. C. White Sur. T.D. 3,925 ft.; swbd.; failed to flow; 7-in. csg. 3,268 ft.; R.U. to pump.

Hastings—Brazoria County

Humble O. & R. Co. No. 1 Brown, W. H. Snyder Sur. R.U.
Humble O. & R. Co. No. 4 Nelson, sec. 36, H.&T.C. Sur. Top oil sd. 5,992 ft.; T.D. 6,080 ft.; 7-in. csg. 5,980 ft.; I.P. 25 B.P.H.; ¼-in. ck.
Stanolind O. & G. Co. No. 1-B Avitts, H.T.&B. Sur. No. 29. 10¾-in. csg. 1,857 ft.; T.D. 5,994 ft.; 7-in. csg. 5,662 ft.; I.P. 544 B.P.D.; ½-in. ck.
Stanolind O. & G. Co. No. 2-B Avitts, H. T.&B. Sur. No. 29. Drlg. sh. 1,480 ft.
Stanolind O. & G. Co. No. 3-B Brown, H. T.&B. Sur. No. 29. Drk.
Stanolind O. & G. Co. No. 1 Wm. R. Carkett, H.T.&B. Sur. No. 35. 10¾-in. csg. 1,863 ft.; T.D. 6,082 ft.; 7-in. csg. 6,060 ft.; comp.; no gauge.
Stanolind O. & G. Co. No. 2 Drodgemeyer, H.T.&B. Sur. No. 29. 10¾-in. csg. 1,856 ft.; drlg. sh. 4,731 ft.

Danbury—Brazoria County

Humble O. & R. Co. No. 1 Moller, S. A. Towsey Sur. Cg. sh. 6,745 ft.

Old Ocean—Brazoria County

Harrison & Abercrombie No. 1 Armstrong Plantation fee, Polly and Chance Sur. T.D. 9,670 ft.; 7-in. csg. cmtd. on bottom; W.O.C.

Manvel—Brazoria County

Bowles et al No. 1 Henderson, E. Little Sur. Drlg. sh. 4,073 ft.
Bowles & Borsodi No. 4 Norvell Co., Inc., H.T.&B. Sur. No. 23. R.U. and S.D.
Sterling O. & R. Co. No. 1 Yewell, H. N. Little Sur. Drlg. sh. and L. 2,950 ft.
Texas Co. No. 14-A Belcher, H. N. Little Sur. 16-in. csg. 59 ft.; drlg. sh. 3,070 ft.
Texas Co. No. 3 Richards, Lot 6, H.T.&B. Sur. T.D. 4,350 ft.; P.B. 3,900 ft.; W.O.C.
Texas Co. No. 8 Houston Oil Field Assn., A.C.H.&B. Sur. No. 91. Drlg. sh. and L. 4,219 ft.
Texas Co. No. 3 Dawson, H.T.&B. Sur. No. 23. Drlg. sd. and sh. 4,320 ft.

West Columbia—Brazoria

Sterling O. & R. Co. No. 1 J. A. Phillips, Geo. Kennilee Sur. Drk.
Texas Co. No. 14 Abrams, George Tenille League Sur. Drlg. sdy. sh. 2,815 ft.
Texas Co. No. 85 Hogg, Geo. Tenille Lge. T.D. 3,196 ft.; P.B.; T.D. 2,762 ft.; 7-in. csg. 3,085 ft.; will perf. csg.

Heyser—Calhoun County

Al Buchanan No. 1 P. H. Welder, D. L. Palmer Sur. T.D. 5,657 ft.; tstd. S.W. on D.S.T. 5,498-5,548 ft.
Humble O. & R. Co. No. 2 Welder, Jose Maria Rios Sur. T.D. 6,050 ft.; set lnr. 5,510-5,375 ft.; tstd. 480 ft. of oily mud on D.S.T. 5,470-71 ft.
Humble O. & R. Co. No. 1-B E. H. Welder, A. Sisneros Sur. T.D. 5,504 ft.; tstd. 90 ft. of oily mud on D.S.T. 5,484-5,500 ft.; will run csg.
Portilla Oil Co. No. 1 P. H. Welder, D. Felipe Durmont Sur. T.D. 4,250 ft.; rng. 7-in. to test.

Anahuac—Chambers County

Gulf Oil Corp. No. 4 Knowles, sec. 48, H. &T.C. Sur. Drlg. L. 2,026 ft.
Humble O. & R. Co. No. 1 Boyt, sec. 44, H.&T.C. Sur. T.D. 7,129 ft.; 7-in. csg. 7,090 ft.; I.P. 706 B.P.H... ¼-in. ck.
Humble O. & R. Co. No. 6 Broussard, sec. 59, H.&T.C. Sur. T.D. 7,100 ft.; 7-in. csg. 7,063 ft.; drlg. plug.
Humble O. & R. Co. No. 4 Gripon, sec. 51, H.&T.C. Sur. 10¾-in. csg. 1,513 ft.; T.D. 7,095 ft.; 5½-in. csg. 7,095 ft.; tstg.
Humble O. & R. Co. No. 4 Johnson, sec. 47, H.&T.C. Sur. 10¾-in. csg. 1,536 ft.
Humble O. & R. Co. No. 1 A. B. Shaver, 9⅝-in. csg. 1,527 ft.; drlg. sh. 5,658 ft.
Sun Oil Co. No. 1 White, James McGahey Sur. Drk.
Humble O. & R. Co. No. 2-B White, James McGahey Sur. T.D. 7,128 ft.; perf. csg. 7,112-14 ft.; comp.; no gauge.
Humble O. & R. Co. No. 12 White, James McGahey Sur. T.D. 7,128 ft.; perf. csg. 7,104-07 ft.; killed well to reperf.
Sun Oil Co. No. 16 White, James McGahey Sur. T.D. 7,125 ft.; 7-in. csg. 7,106 ft.; W.O.C.
Sun Oil Co. No. 20 White, James McGahey Sur. Drlg. L. 5,905 ft.

Turtle Bay—Chambers County

Stanolind O. & G. Co. No. 3 State Land. T.D. 1,147 ft.; 10¾-in. csg. 1,147 ft.; W. O.C.
Sun Oil Co. No. 1 C. J. Chambers, M. A. Carroll Sur. Rig.

Big Creek—Fort Bend County

Gulf Oil Corp. No. 70 Davis, B. Young Sur. Drlg. sh. 4,147 ft.
Martin Drlg. Co. No. 1 W. C. Moore, B. Wickerson Sur. R.U.
H. L. Patton No. 1 Bryan, M. Young Sur. T.D. 1,280 ft.; rmg.

Blue Ridge—Fort Bend County

Aldridge & Taylor No. 3 West & Scheneck, T. Habermacher Sur. Drlg. sh. 2,002 ft.
Ben G. Barnett No. 1-C Blakely, E. Drew Sur. Sdtkd. at 2,373 ft.; cg. sd. 2,630 ft.
H. H. Hoffman No. 1 Lee, J. Poitevent Sur. S.D. 325 ft.; (corrected).

Boling—Fort Bend County

Mack Hawk Oil Co. No. 2-B J. R. Farmer, J. Scott Sur. 10¾-in. csg. 1,618 ft.; drlg. sh. 3,945 ft.
H. K. Spear et al No. 1 Kasperek, Simon Miller Sur. R.U.

Orchard—Fort Bend County

Gulf Oil Corp. No. 46 Moore, Leo Burknapp Sur. Drlg. sh. 5,337 ft.
Gulf Oil Corp. No. 48 Moore, J. Frazier Sur. Drlg. sd. and L. 1,514 ft.
Gulf Oil Corp. No. 6-A Moore, J. Frazier Sur. Drlg. L. rock 1,390 ft.

Sugarland—Fort Bend County

Rogers No. 2 Detherage, E. Alcorn Sur. Drk.

Thompson—Fort Bend County

H. M. Naylor No. 9 Gehr, S. Kennedy Sur. T.D. 5,488 ft.; oil sd.; flwd. oil; sanded up; pulling tbg.

High Island—Galveston County

Stanolind O. & G. Co. No. 57-A Cade, N. Fitzsimmons Sur. T.D. 5,339 ft.; 9⅝-in. csg. 5,282 ft.; drlg. plug.
Stanolind O. & G. Co. No. 58 Cade, N. Fitzsimmons Sur. R.U.
Stanolind O. & G. Co. No. 8 B.&O. fee, M. Dunman Sur. T.D. 5,330 ft.; 7-in. csg. 5,235 ft.; P.B. 5,252 ft.; swbg. S.W., mud and oil; cutting and pulling lnr.

Dickinson—Galveston County

Coast Pet. Co. No. 3 Stewart, W. K. Wilson Sur. Cg. sh. 8,413 ft.
Humble O. & R. Co. No. 4 Magle, J. S. Jones Sur. 10¾-in. 2,016 ft.; drlg. sh. 5,787 ft.
Humble O. & R. Co. No. 9-A Stewart, W. K. Wilson Sur. 10¾-in. csg. 2,830 ft.; cg. sd. 8,400 ft.
Kenben Oil Co. No. 2 Stewart, W. K. Wilson Sur. T.D. 8,660 ft.; surveying hole.
Kenco Corp. No. 1 Broughton, J. S. Sherman Sur. Drlg. sd. 7,950 ft.
Pan American Prod. Co. No. 1 Louise Craig, W. K. Wilson Sur. Drlg. sh. and shells 1,338 ft.
Stanolind O. & G. Co. No. 6 State River Bed. 13⅜-in. csg. 2,119 ft.; T.D. 2,150 ft.; W.O.C.

Greens Lake—Galveston County

Sun Oil Co. No. 1 Hughes, W. C. M. Baker Sur. (W.O.); cutting 9⅝-in. csg. at 2,500 ft.
Sun Oil Co. No. 3 J. D. Hughes, Wm. C. Baker Sur. Cg. sd. rock 1,297 ft.

Arriola—Hardin County

Republic-Houston Oil Co. No. 14 fee, E. Arriola Sur. 13⅜-in. csg. 835 ft.; T.D. 3,285 ft.; 9⅝-in. csg. 3,270 ft.
Republic Prod. Co. No. 15 fee, E. Arriola Sur. R.U.

Batson—Hardin County

Lacawanna Prod. Co. No. 1 Butler, W. Donoho Sur. S.D. 5,465 ft.; abd.

Eureka—Harris County

Houston Oil Co. No. 1 Helberg & Lackner, John Rinerman Sur. T.D. 7,676 ft.; produced 2,500,000 ft. of gas per day through 3/16-in. ck.; killed well to repair leak in christmas tree.

Mykawa—Harris County

West Prod. Co. No. 10 W. H. Irwin, W. B. Walker Sur. Drk.
West Prod. Co. No. 1 Minnetex, Wm. Lovett Sur. T.D. 5,943 ft.; P.B. 5,430 ft.; W.O.C.

Pierce Junction—Harris County

Gulf Oil Corp. No. 41 Taylor, J. Hamilton Sur. Drlg. L. 3,370 ft.
Harrison and Abercrombie No. 2 Ritter, J. Hamilton Sur. Drlg. sd. 1,930 ft.

South Houston—Harris County

R. W. O'Meara No. 1 Sophia Williams, H. T.&B. Sur. T.D. 4,755 ft.; 7-in. csg. 4,585 ft.
Smith & McDannald No. 2 Lamb, H.&T.B. Sur. Drlg. sh. 1,312 ft.
Smith & McDannald No. 2 Reynolds, Blk. 24, H.T.&R Sur. 7-in. csg. set 4,768 ft.
Smith & McDannald No. 1 Vallos, H.T.&B Sur. T.D. 4,783 ft.; 7-in. csg. 4,648 ft.; W.O.C.; I.P. 418 B.P.D.; ¼-in. ck.
Stanolind O. & G. Co. No. 1 Carson, H. T.&B. Sur. No. 6. Drk.
Stanolind O. & G. Co. No. 1 Dunn, Blk 43, H.T.&B. Sur. No. 36. Drlg. sh. and L. 3,614 ft.
Stanolind O. & G. Co. No. 4 First Natl. Bank, Callahan and Vince Sur. 10¾-in. csg. 1,454 ft.; drlg. sh. and L. 2,005 ft.
Stanolind O. & G. Co. No. 1 Lamb, H.T. &B. Sur., Tr. No. 21. Drlg. sh. and L. 3,320 ft.
Stanolind O. & G. Co. No. 1 Owen, H.T. &B. Sur., Tr. 29. 10¾-in csg. 1,450 ft.; T.D. 1,470 ft.; W.O.C.
Stanolind O. & G. Co. No. 1 J. C. Vann H.T.&B. Sur. No. 6, Unit 8. T.D. 4,775 ft.; I.P. 509 B.P.D.; ¼-in. ck.
Stanolind O. & G. Co. No. 1 Williams, Blk. 45, M. Nichols Sur. Drlg. sh. 4,336 ft.

Tomball—Harris County

Humble O. & R. Co. No. 5 Belcher, J. M. Hooper Sur. Abd. 5,659 ft.
Humble O. & R. Co. No. 1 Martens, G. Lamb Sur. R.U.
Humble O. & R. Co. No. 1 Tomball Townsite Unit 16, Lot 47, Ralph Hubbard Sur. 10¾-in. csg. 904 ft.; T.D. 5,569 ft.; 7-in. csg. 5,565 ft.
Humble O. & R. Co. No. 2 Weindorff, L& G.N. Sur. 10¾-in. csg. 943 ft.; T.D. 5,561 ft.; I.P. 23 B.P.H.; ¼-in. ck.
Shell Pet. Corp. No. 1 Beeler, J. Pruitt Sur. T.D. 5,570 ft.; rng. 7-in. csg.

Amelia—Jefferson County

Glenn H. McCarthy No. 2-A B. M. Long, H. Williams Sur. R.U.
Humble O. & R. Co. No. 2 Guinn, C. Williams Sur. 10¾-in. csg. 2,037 ft.; T.D. 6,787 ft.; 7-in. csg. 6,782 ft.; drlg. plug.
Humble O. & R. Co. No. 1 R. G. Perto, C. Williams Sur. Drk.

Big Hill—Jefferson County

Stanolind O. & G. Co. No. 3-A Pipkin and Davis, Wm. McFaddin Sur. T.D. 6,743 ft.; cmtd. S.W. flow; S.D.; heaving sh.

Nome—Jefferson County

Sun Oil Co. No. 2 Paggi, J. W. Kirby Sur. 10¾-in. csg. 1,151 ft.; drlg. sh. and L. 5,418 ft.

Cleveland—Liberty County

Gulf Oil Corp. No. 3 McDonald, Chas. Smith Sur. Drlg. sh. 4,950 ft.

Hankamer—Liberty County

Uscan Oil Co. No. 5 Exzell, Levi Borrow Sur. T.D. 5,678 ft.; 7-in. csg. 2,689 ft.; waiting comp. of No. 6.
Uscan Oil Co. No. 6 Exzell, due south of No. 5, Levi Barrow Sur. Drlg. sd. and sh. 5,080 ft.

Hull—Liberty County

Gulf Oil Corp. No. 1 Weaver, R.U.
Gulf Oil Corp. No. 113 Phoenix, J. Devore Sur. T.D. 4,510 ft.; P.B. 3,300 ft.; sdtkd.; T.D. 3,430 ft.; P.B. and sdtkd. at 2,990 ft.; drlg. sh. 3,008 ft.
Republic Prod. Co. No. 161 Dolbear, J. Devore Sur. Drlg. sh. 3,678 ft.

Esperson—Liberty County

General Crude Oil Co. No. 18 Davis-Kokernot Sur. T.D. 2,864 ft.; 5¾-in. csg. 2,853 ft.; I.P. 18 B.P.H.; pmpg.
General Crude Oil Co. No. 29 Esperson, C. W.O.C.; T.D. 3,911 ft.; 7-in. csg. 3,900 ft.; tstd. S.W.; pulling screen.
General Crude Oil Co. No. 17 Moores Bluff, M. Duncan Sur. 9⅝-in. csg. 2,717 ft.; W.O.C.

Van Vleck—Matagorda County

Skelly Oil Co. No. 9-C Cobb, M. Cummins Sur. Drlg. sh. and sd. 5,027 ft.
Skelly Oil Co. No. 10 C. Cobb, M. Cummins Sur. Drlg. sh. 1,315 ft.
Skelly Oil Co. No. 2 Metzer, M. Cummins Sur. T.D. 7,500 ft.; 7-in. csg. on bottom.

Conroe—Monigomery County

Adeltex Oil Co. No. 1 Lewellen, R. G. Hunter Sur. Drk.
Alpha Pet. Co. No. 5 Stevens, L. Smith Sur. Drlg. sh. 4,037 ft.
A. U. Morrison No. 3 T. B. McComb, L. Smith Sur. Drlg. sh. 2,837 ft.
Strake Pet. Co. No. 10 Keystone, L. Smith Sur. Drlg. 4,957 ft.

Livingston—Polk County

Humble O. & R. Co. No. 30 Granbury, A. Viesca Sur. 9⅝-in. csg. 527 ft.; W.O.C.

Orange—Orange County

Texas-Canadian Oil Co. No. 1 Lutcher Moore, J. Dyson Sur. Drk.

Greta—Refugio County

Hewitt & Daugherty No. 26 Lambert, Swisher Sur. T.D. 5,884 ft.; I.P. 305 B. P.D. through ¼-in. ck.
Hewitt & Daugherty No. 27 Lambert, Swisher Sur. 10¾-in. csg. 953 ft.; T.D. 5,902 ft.; oil sd.; I.P. 584 B.P.D. through ¼-in. ck.
Josey & Bruton No. 1 Lambert, Swisher Sur. Drlg. sh. 3,312 ft.
National Pet. Corp. No. 1 S.L.B.&M.R.R. Blow out; T.D. 4,400 ft.; hole lost; abd.
United Prod. Co. No. 26 Lambert, Swisher Sur. T.D. 5,911 ft.; 7-in. csg. 5,888 ft.; I.P. 150 B.P.D.; 7/64-in. ck.
United Gas Co. No. 27 Lambert, C. S. Hardwick Sur. Drk.

Refugio—Refugio County

Atlantic O. P. Co. No. 6 Tomoconnor, N. S. Crunk Sur. 10¾-in. csg. 1,310 ft.
United Prod. Co. No. 14 Fannie Heard, Refugio townsite, T.D. 4,923 ft.; 5½-in. csg. 4,918 ft.; I.P. 150 B.P.D. through ½-in. ck.
United Gas Co. No. 19 Fox. T.D. 5,150 ft.; P.B. 2,129 ft.; drlg. sh. 5,527 ft.

Quintana-O'Connor—Refugio County

Quintana Pet. Co. No. 1 Reilly, Ximines Sur. Drlg. sh. 5,235 ft.
Quintana Pet. Co. No. 2-C O'Connor, Main Sur., Blk. 37. T.D. 5,921 ft.; I.P. 170 B. P.D. through ¾-in. ck.
Quintana Oil Co. No. 4-C O'Connor, Blk. 36, G. W. Maine Sur. Drk.
Quintana Oil Co. No. 37-A O'Connor, Swisher Sur. R.U.

Placedo—Victoria County

American Liberty Oil Co. No. 1 A. Cortes, J. M. Brownson Sur. Drlg. sh. 3,500 ft.
Barnsdall-American Liberty No. 3 W. B. Smith, A. Murphy Sur. T.D. 6,095 ft.; fsg. Barnsdall Oil Co. and American Liberty

Oil Co. No. 5 Pickering and Roos, J. M. Brownson Sur. R.U.

Crown Central Oil Co. No. 1 Henderson and Pickering, J. M. Brownson Sur T.D. 4,780 ft.; oil sd.; 7-in. csg. 4,757 ft.; I.P. 220 B.P.D.; ¼-in. ck.

Crown Central Oil Co. No. 5 Gehrauer, S. A.&M.G. Sur. Drk.

Commonwealth No. 3 Prencia, J. M. Brownson Sur. R.U.

Eastern Texas Oil Co. No. 3 Hosek, S.A.& M.G. Sur. No. 7. T.D. 4,776 ft.; 7-in. csg. 4,768 ft.; I.P. 140 B.P.D.; 24 hrs.; ¼-in. ck.

Harrison & Abercrombie No. 2 Voss, J. M. Brownson Sur. T.D. 4,767 ft.; 7-in. csg. 4,749 ft.; comp.; no gauge.

Harrison and Abercrombie No. 3 Voss, J. M. Brownson Sur. Spudded.

Haynes B. Ownby No. 2 Joe Malik, J. M. Brownson Sur. Drlg. sh. and L. 4,205 ft.

Haynes B. Ownby No. 1 Traylor, J. M. Brownson Sur. Drk.

Magnolia Pet. Co. No. 2 Henderson, Wm. Rupley Sur. Drk.

Magnolia Pet. Co. No. 1 Klor, S.A.&M.G 10¾-in. csg. 873 ft.; T.D. 4,775 ft.; 7-in. csg. 4,759 ft.; I.P. 156 bbls. in 12 hrs.; ⅝-in. ck.

Magnolia Pet. Co. No. 2 Sklar, S.A.&M.G. Sur. Drk.

Westgate Oil Co. No. 3 Mieska, J. M. Brownson Sur. 10¾-in. csg. 839 ft.; W. O.C.

Clay Creek—Washington County

Pompkal et al No. 3 Klatle, S.D. 435 ft.

Sun Oil Co. No. 4 Droger. T.D. 1,145 ft.; comp. for gas well.

Sun Oil Co. No. 5 Droger, J. F. Perry Sur. Drlg. 1,297 ft.

Sun Oil Co. No. 1 H. Lauter, N. Clay Sur. Drlg. sh. 7,251 ft.

Louise—Wharton County

Pure Oil Co. No. 1 Houston, Wallace, Morris and Cummings Sur. T.D. 5,155 ft.; I.P. 91 bbls. in 11½ hrs.; ¼-in. ck.

Pure Oil Co. No. 2 Jones, Morris and Cummings Sur. Drlg. sh. 2,226 ft.

Pickett Ridge—Wharton County

Texas Co. No. 26-A Pierce, I.&G.N. Sur No. 38. T.D. 4,708 ft.; 7-in. csg. 4,708 ft.; drlg. sd. and sh. 4,713 ft.

Texas Co. No. 27-A Pierce, I.&G.N. Sur No. 38. T.D. 4,711 ft.; 7-in. csg. 4,705 ft.; pulling tbg.

Texas Co. No. 28-A Pierce, I.&G.N. Sur No. 39. T.D. 4,703 ft.; 7-in. csg. 4,696 ft.

Texas Co. No. 29-A Pierce, I.&G.N. Sur. No. 39. Drk.

Withers—Wharton County

Texas Co. No. 10-C Pierce, Wm. Pettus Sur. 16-in. csg. 36 ft.; drlg. sh. and L. 2,722 ft.

Texas Co. No. 11-C Pierce, John Caldwell Sur. Drlg. sd. and bldrs. 1,654 ft.

GULF COAST WILDCATS

Austin County

W. H. Mitchell et al No. 1 F. Fenner, J Fitzgibbons Sur. S.D. 1,965 ft.

Brazoria County

Strake Oil Corp. et al No. 1 D. K. Poole J. W. Hardin Sur. T.D. 7,509 ft.; S.D

Texas Co. No. 1 Robbins, J. W. Brougham Sur. Drlg. sh. and sd. 3,936 ft.

Chambers County

Glenn H. McCarthy No. 1 Kilgore, J Townsend Sur. T.D. 6,308 ft.; oil sd.; 7-in. csg. 6,290 ft.; I.P. 218 bbls. in 25 hrs. through various chokes; T.P. 1,950 lbs.; C.P. 2,100 lbs.

Calhoun County

Benedum & Trees No. 1 Roemer Est., John T. Oggsberry Sur. 13-in. csg. 1,567 ft.; drlg. sh. 5,200 ft.

Continental Oil Co. No. 1 Austin Estate sec. 12, Blk. H. T.D. 8,825 ft.; 6-in. pipe stuck at 8,812 ft.; fsg.

Colorado County

Coyle-Concord & Sterling No. 1 Mary F South, I.&G.N. Sur., sec. 41. 10¾-in. csg. 755 ft.; W.O.C.

Fayette County

Paul Teas No. 1 Clem Vnklarek, S. Millet Sur. S.D. 200 ft.

Galveston County

Shell Pet. Corp. No. 1 Maco Stewart. Spillman Sur. Drlg. sh. 7,645 ft.

Hardin County

Republic-Houston Oil Co. No. 1 Brooks T.D. 6,982 ft.; 7-in. csg. 6,963 ft.; blew out; caught fire; cratering; est. 50,000,000 ft. of gas and 2,500-3,000 bbls. of oil.

Harris County

Bunte O. & G. Co. No. 1 Lobit et al Benjamin Barrow Sur. Spudded.

D. B. Cherry et al No. 1 Bert J. Dodge, Josiah Harrell Sur. Spudded.

Houston County

Walter Goldston No. 1 Burns, Juan La Reviere Sur. Abd. 5,899 ft.

Jackson County

Steinberger Pet. Corp. No. 1 Drushel F Rodrigues Sur. T.D. 7,155 ft.; cutting stuck drill pipe.

Jefferson County

C. W. Mephail No. 2 B. W. Owens, Joseph Grigsby Sur. Spudded 240 ft.

Sun Oil Co. No. 1 Herbert & Broussard. B Blackman Sur., Abst. No. 2. T.D. 9,848 ft.; gas sd.; cmtd. back 8,264 ft.; made squeeze job 8,245-65 ft.; cmtd. hole 8,242-6,572 ft.; abd.

R. S. Tatum et al No. 1 Owens, Lot 3. Blk. 9, Port Arthur Land Co. Sur. S.D. 3,880 ft.; abd.

Lavaca County

Cole Pet. Co. No. 1 Reed-Nollkamper, A. Smothers Sur. S.D. 2,395 ft.

Matagorda County

Cockburn Oil Co. No. 8 Hawkins, D. McCarthy Sur. R.U.

Victor H. Driscoll No. 1 Griffith, I.&G.N. Sur. No. 18. S.D. 2,700 ft.

Pierce Estate Inc. No. 1 Fee, Wm Brown Sur. T.D. 6,816 ft.; P.B. and sdtkd. 2,453 ft.; abd. 4,720 ft.

Sterling O. & R. Co. No. 1 Baer ranch, Samuel Hoyt Sur. Washing to bottom; T.D. 6,800 ft.

Tetts & Harris No. 1 Pierce, Lot 23, W. E. Wallace Sur. Drlg. sh. 2,038 ft.

Texas Gulf Prod. Co. (H. M. Smith) No. 2 Wadsworth, S. R. Fisher Sur. Drlg. sh. 7,459 ft.

Montgomery County

Fohs-Blumenthal No. 1 Central Coal & Coke Co., J. Stockley Sur. Cg. sh. 3,606 ft.

C. E. Gates et al No. 1 Yarborough, Wm. Baker Sur. R.U.

Ped Bank Oil Co. No. 1 Central Coal & Coke Co., T. P. Whitmore Sur. R.U.

Orange County

Tide Water Oil Co. No. 1-A E. W. Brown, Welsey Dykes Sur. R.U.

Refugio County

Benedum & Trees No. 1 R. H. Welder, Juan Pabedan Sur. Drlg. shale.

E. W. Price et al No. 1 Wood, Antastacio Roogas Sur. Drlg. shale 3,830 ft.

Victoria County

Plymouth Oil Co. No. 1 J. J. Welder, S. A. Balding Sur. R.U.

Walker County

L. M. Gay et al No. 1 M. E. Stubblefield, G. Bodilla Sur. S.D. 2,104 ft.

Wharton County

Continental Oil Co. No. 1 J. F. Weekly, Joseph Clements Sur. Drlg. sd. and sh. 1,031 ft.

Pure Oil Co. No. 1 A. P. Borden et al, W. H. Leckie Sur. No. 25. Drlg. sdy. sh. 7,308 ft.

Pure Oil Co. No. 1 Sam Shultz, L. P. Ogden Sur. No. 108. Abd. 7,695 ft.

Texas Crusader Oil Co. No. 1 fee, J. Smith & McKenzie Sur. 10¾-in. csg. 1,284 ft.; T.D. 3,798 ft.; fsg.

S. W. TEXAS WILDCATS

Atascosa County

Atascosa Trust No. 1 Domsch, 180 ft. S line, 300 ft. E line, 152-ac. lease, J. T. Russell Sur. 1,222. Cg. 4,008 ft.

Helvetia Oil Co. No. 1 S. Pratt, 1,400 ft. NW line, 3,470 ft. SW line, J. de la Garza Sur. Cg. Serpentine 3,121 ft. (cor.).

Bastrop County

Marts & Beavens No. 1 Jenkins, cen. Lot 24, Bastrop townsite. D.&A. 3,410 ft.

Paul Teas No. 1 Vinklarek, S. Millet League. Spudded in.

Bee County

R. Singer No. 1 McKinney, 330 ft. NE line, 1,650 ft. SE line, 50-ac. tr., Randolph Sur. Loc.

Brooks County

California Co. No. 1 B. Garcia, 465 ft. N and W lines lse., B. Garcia tr., Salinas Sur. T.D. 8,022 ft.; P.B. 3,029 ft.; jetted with gas; made 60 bbls. oil, some water; shut in.

Burleson County

Red Bank Oil Co. No. 1 Grann, 2,875 ft. S line, 1,500 ft. E line, E. Santel Sur. Set surf. csg.; W.O.C.

Caldwell County

Barnett Pet. Co. No. 1 Straum, 1,050 ft. SE line, 500 ft. SW line tr., Pablo Martinez Sur. Comp. in Serpentine 1,773-84 ft. for 60 B.P.D.

Elam et al No. 1 Francis, 450 ft. SW and SE lines, 291-ac. tr., Young Sur. Sd. 1,740-45 ft.; set csg. 1,737 ft.; making small head oil with drlg. fluid.

L. M. Kniffin No. 1 Young, 1,000 ft. W line, 150 ft. S line, 364-ac. tr., J. R. Miller Sur. Tested sulfur wtr. 2,353 ft.; to test Georgetown.

Wheelock & Collins No. 1 Alexander, 150 ft. NE line, 1,095 ft. NW line, 158-ac. tr., Spiller Sur. Prep. set csg. 1,970 ft.

Duval County

Frank Buttram No. 1 Nueces Land & Livestock Co., 1,350 ft. N line, 1,700 ft. E line, Sur. 102. Loc.

Conservative Oil Co. No. 2 D.C.R.C., 990 ft. SE line, 330 ft. NE line, NW¼, Sur. 51. Perf. 1,516-19 ft.; comp. est. 110 B.P.D.

Conservative Oil Co. No. 3 D.C.R.C., N½ Blk. 17, Sur. 15. Loc.

Frank Gravis No. 2 Gravis, 3,050 ft. SE line, 990 ft. SW line, Sur. 250. R.U.

Hamil & Smith No. 2 Benavides, Subd. 1, Mesquite Gr. Drlg. 2,326 ft.

Intrepid Oil Co. No. 3 Parr, 723 ft. S and E Lines, Sur. 226. Sd. 4,002-10 ft.; S.O.; set csg. and drlg. plugs.

Rogers & Rogers No. 1 Valadez, 150 ft. NE and SE lines, 80-ac. tr., Mesquite Gr. Drk.

Shell Pet. Corp. No. 1 Taylor, 330 ft. S and W lines, NW¼, Sur. 214. R.U.

Edwards County

Plateau Oil Co. No. 1 R. L. Hatch, sec. 66, J. W. May Sur. M.I.M.

Goliad County

California Co. No. 1 Langrebe, 466 ft. N and E lines tract, Thomas Hancock Sur. Set sur. csg.; W.O.C.

C. Morgan No. 1 Metz, 4,290 ft. N line, 330 ft. E line tr., G. Barrera Sur. Tstg. 5,660 ft.

Sun Oil Co. No. 1 Fromme, A. Martie Sur. Loc.

Zeni Oil Co. No. 3 Lutenbacher, 330 ft. N and W lines, SE¼, sec. 25. Cored sd. and sh. 5,603-35 ft.; P.B. 5,590 ft.; drlg. plug in liner.

Hidalgo County

Gulf States Oil Co. No. 3 John Engleman, Lot 3, Blk. 70. T.D. 6,812 ft.; sh.; flwg. 5 bbls. fluid per day, 80 per cent distillate, 20 per cent S.W.; C.P. 1,500 lbs.

Helen K. Maxwell No. 1 Hidalgo Wtr. Dist. No. 2, Lot 11, Blk. 20. T.D. 680 ft.; perf. 640-45 ft.; bailing; no show.

Jim Hogg County

Theo. Hicks No. 1 Kohler, sec. 9, Noriaccitas Gr. Spdg. in.

Locke Purnell and Gifford Oil Co. No. 1 Gallagher, Blk. 128, Pippin Division, Randado Gr. Loc.

Neuhaus & Meek No. 1-A Martinez, 1,540 ft. N line, 330 ft. E line, sec. 623. Drld. plugs 3,009 ft.; attempting comp. at 3,010-17 ft.

Henry Swift et al No. 1 Holbien, Blk. 58, sec. 3, Las Animas Gr. Loc.

Jim Wells County

Gist & Graddy No. 1 Owens, 660 ft. N line, midway E and W lines, Sur. 151 Sd. 3,990-4,012 ft.; drlg. 4,547 ft.

La Jita Corp. No. 1 Schallert, 3,919 ft. S line, 2,097 ft. E line tr., Las Presenos Abajo Gr. Drlg. wtr. well.

Putnam & Stewart No. 1 Canales, C Blk. 32, Mosser Subd., Canales Est. Loc.

Karnes County

R. L. Barnett No. 1 fee, NE cor. 568-ac tr. Drlg. 3,027 ft.

Kerr County

Auld & Evans No. 1 Hefferman, 660 ft. N line, 330 ft. E line, sec. 13, B.S.&F. Sur. D.&A. 3,100 ft.

Kleberg County

E. B. Clark No. 1 Kivlin, 150 ft. N and E lines, Blk. 8, sec. 39, Kingsville Town & Improvement Subd. S.D. 1,319 ft.; (corrected).

LaSalle County

Davenport & Talbot No. 1 Watkins, 1,610 ft. S line, 330 ft. E line, Sur. 103. D.&A. 2,730 ft.

Kennedy & Johnston No. 1 Gilman & Wildenthal, 330 ft. NW and NE lines, 140-a. tr., Sur. 283. Rebldg. drk.

Roy Shipman No. 2 Coleman, 330 ft. S line, 2,970 ft. W line, 500-ac. tr., James Sur. Drlg. 1,707 ft.

W. H. Vernon No. 1 Las Abias ranch. 150 ft. N line, midway E and W lines, sec. 726. Drlg. 167 ft.

Live Oak County

Dirks Bros. No. 1 Nichols, S. Ryan Sur. Drlg. 1,436 ft.

R. Feltner No. 1 Sanger, 990 ft. S line, 330 ft. W line, E½, Sur. 391. Loc.

J. J. McRoberts No. 1 Mahoney, 3,100 ft. SW Junction Three Rivers, Tilden Highway and Thomas Henry Sur. lines, 150 ft. N. T.D. 2,516 ft.; D.&A.

Simmons O. & G. Co. No. 5 McGriff, Louis Romaro Sur. R.U.

Smith & Storey No. 3 Dinero townsite, Jane Curry Sur. Drlg. 2,814 ft.

Sun Oil Co. No. 1 James, Pat McGlover Sur. Loc.

Maverick County

Rio Dev. Co. No. 1 Winchester Kelson, 150 ft. W line, 750 ft. S line, E½, 130-ac. tr. spudding.

Thornton & Underwood No. 1 Thompson, 2,000 ft. SW line, 750 ft. SE line, Uvalde Co. Sch. Ld., Sur. 2. M.I.R.

McMullen County

Deculner & Richardson No. 2 Fohler, Pittuck Sur. Loc.

F. R. Floyd et al No. 1 Plaserk, 150 ft. N and E lines, Blk. 2, Garner Sur. Drlg. sh. 721 ft.

Hagen Stewart Oil Co. No. 1 Kunz, M. Hely Sur. Loc.

C. I. Jennings No. 1 Regan, 1,070 ft. S. Frio River, 330 ft. W line, 642-a. tr., Haley Gr. S.D. 1,026 ft.

Magnolia Pet. Co. No. 1 Teal, 10,297 ft. N line, 3,310 ft. E line, Kuykendall Sur. Loc.

E. D. Mathis No. 1 Fahler, 2,000 ft. S line, 75 ft. E line, 500-ac. tr. Loc.

Mills Bennett Prod. Co. No. 1 La Chusa, 660 ft. N and W lines, NW¼ SE, Sur. 52. T.D. 2,511 ft.; D.&A.

I. Taylor No. 1 Lark, 150 ft. S and W lines, Lot 72, Scrugham Sur. R.U.

Medina County

N. C. Johnson No. 1 Taylor, 360 ft. E line, 168 ft. S line, 320-ac. tr., Castro Sur. 136. M.I.M.

Thomas & Rife No. 1 Zadick, 2,800 ft. N line, 250 ft. W line, Lubbock Sur. 509 Top Austin chalk 2,646 ft.; reaming; T.D. 2,697 ft.

Nueces County

O. W. Killam No. 1 Crook, 330 ft. S and E lines, NE¼ sec. 15. Drlg. 4,313 ft.

G. M. Richardson No. 1 Carter, cen. NW¼, SE¼ sec. 8, Laurells Farms Tra. Drk.

San Patricio County

Atlantic Oil Prod. Co. No. 1 Maryland Trust Co., cen. W½, Lot 11, Blk. 42, McCampbell Subd. Twisted off D.S. 5,356 ft.; P.B.; set whipstock 4,904 ft.; drlg. 5,919 ft.

Benedum & Trees Oil Co. No. 4 Welder, 900 ft. N line, 350 ft. E line, sec. 19. Cg. dry sd. 5,745 ft.; top sd. 5,732 ft.

L. A. Douglas and Empire O. & R. Co. No. 1 Konze, 330 ft. N and E lines, sec. 16, Tr. 2. Drlg. 4,059 ft.

O. W. Killiams No. 1 Green, 150 ft. E and NW lines tract, Geo. H. Paul Subd. D.&A. 5,669 ft.

Joe Lundins No. 1 Welder, 330 ft. N and W lines, sec. 30, Paul Subd. T.D. 6,009 ft.; S.D.

Plymouth Oil Co. No. 2-D Welder, 466 ft. N and E lines, sec. 4. Drlg. sh. 6,399 ft.

K. Sharp et al No. 1 McGloin, 330 ft. S and W lines, sec. 33, Paul Subd. Fsg. 5,802 ft.

Trinity Drillers, Inc., No. 1 Mayfield, Lot 11, Roos Subd. Set sur. csg. 639 ft.; W.O.C.

Starr County

J. F. Anderson No. 1 Yzaguerre, Tr Porc. 79, J. of Camargo. D.S.T. 2,592-2,610 ft.; S.W.; S.D.

J. H. Clopton No. 4 Roos, 330 ft. S and W lines, Blk. 5, Porc. 91. Drlg. 2,269 ft.

Davenport-Slick-Urschel No. 1 Slick Est., Davenport ranch, sec. 485. Spudded in; drlg. wtr. well.

Porter Evans No. 1 Ferry, C Lot 3, Porc. 86. Drlg. 1,223 ft.

Ed Leach No. 1 Dana Est., Porc. 84, J. of Camargo. P.B.; perf. 963-75 ft.; R.P. 400 lbs.

A. G. McMath No. 1 Guerra, Blk. 21, Porc. 55. Drlg. 338 ft.

Webb County

Cole Pet. Co. No. 1 Peters, Sur. 195. Loc.

Mid-Continent Pet. Corp. and Oklahoma Co. of Texas No. 1 Laubscher, 330 ft. NE and NW lines, NW¼, sec. 1,394. S.D.; water; spudded.

Lu-Tex Oil Co. No. 1 Lone Star, Porc. 12; (W.O.). Fsg. 2,317 ft.

Porter & Blanchard No. 1 Benavides, Blk. 365, Hale Subd., Arispe Gr. Drlg. 2,712 ft.

Willacy County

M. E. Morton et al No. 1 Santa Rosa, 330 ft. N and E lines, Lot 12, Blk. 21 Santa Rosa Subd., Sh. 44. Spudded; S.D

Shell Pet. Corp. No. 1 Yturria Land & Cattle Co., 990 ft. S and E lines, Share 64, San Juan de Carricitos Gr. T.D. sd. 7,602 ft.; S.O.; reaming 7,574-98 ft.

Wilson County

A. G. Reimenschneider No. 2 L. Harrell 750 ft. NE line, 2,800 ft. NW line, Barrera Sur. S.D. 740 ft.

S. W. TEXAS PROVEN

Voss—Bee County

Devonian Oil Co. No. 2 Voss, 660 ft. N No. 1, S. May Sur. Loc.

R. B. Swiger No. 1-A Voss, 330 ft. N and E lines, 101-ac. tr., S. May Sur. Sd. 3,989-4,002 ft.; perf. 3,997-4,002 ft.; flwg. 5½ bbls. oil per hour with gas-oil ratio increasing; C.P. 1,500 lbs.

R. B. Singer No. 2-A Voss, 330 ft. E line, 990 ft. N line, 101-ac. tr., S. May Sur. Spudded.

Alta Verde—Brooks County

Nordan, Morris & Nash No. 3 Singer, Sur. 312. D.S.T. 751-59 ft. 15 min.; 390 ft. sulfur wtr. on ⅜-in. ck.; cg. sd. 827 ft.

Government Wells—Duval County

Magnolia Pet. Co. No. 1 Wendt, Sur. 43. Sd. 2,215-36 ft.; tested dry; cg. 2,359 ft.

Morris Stein No. 1 Hahl, 160-ac. tract, Sur. 47. Spudded. S.D.

Hoffman—Duval County

Duval Oil Corp. No. 6 Ruiz, 330 ft. S and E lines, sec. 119. Drlg. 2,406 ft.

W. D. Masten No. 2-D Ruiz, Sur. 128. Sd. 2,587-2,608 ft.; set csg.; W.O.C.

Plymouth Oil Co. No. 4-B Hoffman, Sur. 118. T.D. 2,899 ft.; comp. est. 5 B.P.H.

Rogers & Rogers No. 5 Hoffman, Sur. 118. Sd. 2,724-27 ft.; cg. 2,756 ft.

Loma Novia—Duval County

Bridwell Oil Co. No. 3-B Hubbard, Sur. 73. Comp. 221 B.P.H.; T.D. 2,557 ft.

R. DeLange No. 8 B.C.C., SE¼, Sur. 76. R.U.

R. DeLange No. 9 B.C.C., Sur. 73. Comp. 240 B.P.D.; T.D. 2,740 ft.

Highland Oil Co. No. 23 Hubbard, Sur. 72. T.D. 2,765 ft.; comp. 250 B.P.D. on ½-in. ck.

Humble O. & R. Co. No. 13-A Hubbard, Sur. 82. T.D. oil sd. 2,729 ft.; swbg. in.

Humble O. & R. Co. No. 14-A Hubbard, Sur. 84. Drlg. 2,850 ft.

Humble O. & R. Co. No. 10-B Hubbard, Sur. 83. Sd. 2,741-53 ft.; comp. 38 B.P.H.; T.D. 2,753 ft.

Humble O. & R. Co. No. 10-C Welder, Sur. 554. T.D. sd. 2,762 ft.; set csg.; W.O.C.

Humble O. & R. Co. No. 11-C Welder, Sur. 554. Set csg. 2,751 ft.; W.O.C.

Joe Palmer No. 1 Hahl, Sur. 61. Cg. 2,337 ft.

Pitkins & Goldston No. 2 B.C.C., 330 ft. N line, 1,650 ft. W line, W½ S½, Sur. 57. T.D. 2,475 ft.; testing.

Shell Pet. Corp. No. 6 Bishop, Sur. 59. Drk.

Shell Pet. Corp. No. 16 Hubbard Sur. 77 Drk.; M.I.M.

Shell Pet. Corp. No. 14 Mendoza, Sur. 68. T.D. 2,747 ft.; comp. 13 B.P.H.

Texas Co. No. 3 B. Ruiz, 330 ft. W, 284 ft. S, lower NE cor. lse., Sur. 41. R.U.

Loma Vista—Duval County

Atlantic Oil Prod. Co. No. 1 J. F. Welder hrs., 330 ft. N and E lines, 160-ac. tr., Sur. 103. Loc.

Pan American Pet. Co. No. 1-H Welder, 330 ft. N and W lines, 160-ac. tr., Sur. 103. T.D. 3,006 ft.; P.B. 2,863 ft.; set csg. 2,822 ft.; drlg. cmt. 2,840 ft.

Shell Pet. Corp. No. 1-B Welder, 330 ft. S line, 2,590 ft. W line, Sur. 69. S.D. 3,242 ft.

Palangana—Duval County

Frank Gravis No. 3-A Scharlett, Sur. 255 T.D. 2,723 ft.; W.O. larger rig.

Peters—Duval County

Tom Graham No. 1 Sutherland, Sur. 188. Tstd. dry gas 2,459-65 ft.; cg. 3,133 ft.

Mid-Continent Pet. Corp. No. 1 Peters, 120-ac. tr., Sur. 159. Drlg. 521 ft.

Windsor Oil Co. No. 4-B Peters, 660 ft. N No. 3-B, 330 ft. E line, sec. 34. Loc.

Piedra Lumbre—Duval County

Magnolia Pet. Co. No. 9 D.C.R.C., Sur. 95. Sd. 1,960-72 ft.; W.O.C.

Texas Co. No. 19 D.C.R.C., Sur. 100. Sd. 1,950-65 ft.; comp. 14 B.P.D., open tbg.; C.P. 130 lbs.

Seven Sisters—Duval County

Atlantic Oil Prod. Co. No. 14-D Welder, Sur. 113. Sd. 2,466-79 ft.; comp. 4.5 B. P.H.; jetting.

Atlantic Oil Prod. Co. No. 15-D Welder, Sur. 113. Drlg. 2,276 ft.

Atlantic Oil Prod. Co. No. 16-D Welder, Sur. 113. Tested sd. 2,204-20 ft.; gas; set csg.; W.O.C.

Atlantic Oil Prod. Co. No. 7-E Welder, Sur. 102. T.D. 2,469 ft.; D.&A.

Darby Pet. Corp. No. 5-A Welder, Sur. 102. Sd. 2,412-33 ft.; comp. 120 B.P.D.; T.D. 2,438 ft.

Humble O. & R. Co. No. 23 Smith, Sur. 382. Drlg. 2,026 ft.

Humble O. & R. Co. No. 24 Smith, Sur. 382. Drlg. 69 ft.

Humble O. & R. Co. No. 6 Wright, Sur 118. Testing 2,482-2,505 ft.

Humble O. & R. Co. No. 7 Wright, Sur. 118. Drlg. sd. and L. 2,508 ft.

Illinois Pet. Co. No. 4 Hazelwood, Sur. 110. R.U.

Illinois Pet. Co. No. 7 Hazelwood, Sur. 102. Set csg. on sd.; W.O.C.; T.D. 2,497 ft.

Ed Leach No. 2 R. Serna, Sur. 384. M.I.M.

Mid-Continent Pet. Corp. No. 9 Serna, Sur. 384. Sd. 2,191-2,206 ft.; set csg. 2,189 ft.; comp. 118 B.P.D. on pump.

Relience Oil & Roy. Co. No. 9 Drummond, Sur. 308. Drlg. 2,332 ft.

Parr Oil Co. No. 2 Sling, Sur. 118. Sd. 2,-504-06 ft.; tstg.

Relience Oil & Roy. Co. No. 8 Drummond, Sur. 308. Sd. 2,474-92 ft.; comp. 42 B.P. H.; C.P. 490 lbs.

C. S. Sollers No. 1 Welder, Sur. 102. Sd. 2,422-41 ft.; testing.

Texas Co. No. 2 Badgley, Sur. 307. Sd. 2,511-17 ft.; comp. 346 B.P.D.; T.D. 2,-541 ft.

Westheimer & Daube No. 16 Campos, Sur. 224. R.U.

Pearsall—Frio County

Amerada Pet. Corp. No. 1 Miller, 466 ft. NE and SE lines tr., B. Saltillo Sur. No report.

Combs & Oakes No. 1 Arp, 330 ft. S and E lines, 102-ac. tr., S. Blair Sur. 297. Top chalk 5,507 ft. Saturation cored 5,-535-55 ft.; acidized and shot; cleaning hole; T.D. 5,921 ft.

North Pettus—Goliad County

Bostex Oil Co. No. 1 Lackey, 1,650 ft. NW line, J. Gomez Sur., 1,660 ft. SW of No. 3-A. Loc.

Diamond Half Oil Co. No. 2-B Lackey & Welden, J. Gomez Sur. Fag. 5,636 ft.

Weinert No. 2-C Gillette, J. Gomez Sur. Set csg. 3,670 ft.; W.O.C.; T.D. 3,683 ft.; D.S.T. 3,666-87 ft.; 100 ft. oil, mud and gas 8 min.; to retest.

Mercedes—Hidalgo County

Union Sulphur Co. No. 7 American Rio Grande L. & I. Co., 4,000 ft. SE of No. 1 Farm Tr. 2,309, Blk. 59. T.D. 7,597 ft.; retstd. 7,578-88 ft.; no show; S.D.

Union Sulphur Co. No. 8 American Rio Grande L. & I. Co., 660 ft. N & E lines Tr. 2,120, Blk. 87. T.D. 7,560 ft.; set csg. 7,450 ft.; sh.; jetting with gas; making 60 gal. fluid per day, 70% 42 grav. oil.

Union Sulphur Co. No. 10 American Rio Grande L. & I. Co., Blk. 50, Tr. 2,418. N. Caprisallo Dist. Drlg. sdy. sh. 6,613 ft.

Mestanas—Hidalgo County

McCullom Expltn. Co. No. 1 Harding, Lot 11, Blk. 94, Missouri-Kans. L. & I. Co., Subd. Mestanos Gr. R.U.

Samfordyce—Hidalgo County

J. T. Barlow No. 1 Marta Flores de Chapa, Tr. 250, Porc. 39 (W.O.). Cored sd. 2,938-50 ft.; set 4-in. csg.; P.B. 2,500 ft.; sdtkd. 2,475 ft.; perf. 2,953-55½ ft.; making distillate and gas and spraying some oil.

Dean Bros. No. 2 Lula George, 450 ft. S line, 150 ft. W line, 10-ac. tr., Tract 18, Porc. 41. Cg. 3,742 ft.

Wheeler No. 3 F. Farias hrs., Tr. 255, Porc. 39. Perf. 2,836-43 ft.

Henne-Winch-Fariss—Jim Hogg County

Sam Payne No. 1 Holbien, 150 ft. N and W lines, Blk. 10, Share 3, Las Animas grant. Loc.

Bentonville—Jim Wells County

La Jita Corp. No. 1 Erck, 330 ft. N & E lines, N½ sec. 75. T.D. 5,470 ft.; P.B. 4,000 ft. sd.; W.O.C.

La Jita Corp. No. 1 Frame Bowers, 330 ft. N and E lines, sec. 14. Loc.

La Jita Corp. No. 1 Hayden, 990 ft. N line, 330 ft W line, NE¼, sec. 19. Drlg. 5,093 ft.

Lucey Pet. Co. No. 1 Coopwood, 330 ft. N and W lines, 221-ac. tr., sec. B. Sd. 4,063 ft.; tstd. S.W.; cg. 5,519 ft.

Lucey Pet. Co. No. 1 LaParelle, 330 ft. N and E lines, NW tr., sec. 19. Drlg. 2,036 ft.

Stanolind O. & G. Co. No. 2 Blundell, 330 ft. N line, 330 ft. E line, NE¼, SW¼, sec. 16. Drlg. 5,063 ft.

Stanolind Oil & Gas Co. No. 1 Pope, sec. 13. Sd. 3,831-43 ft. tested gas; cg. ahead 3,957 ft.

Stanolind O. & G. Co. No. 1 Southwestern Life, 330 ft. N line, 339 ft. W line, sec. 19. T.D. 5,343 ft.; testing.

Lucas—Live Oak County

Houston Oil Co. No. 35 Cartwright, 800 ft. NE R.R., 2,440 ft. NW of No. 33. P.B. 2,510 ft.; prep. to test.

Calliham—McMullen County

Comet Oil Co. No. 1 Lark, 150 ft. S and W lines, Blk. H, Scrugham Sur. No report.

Loma Oil Co. No. 5-F Jacob, Faddin Sur. Cg. 692 ft.

Loma Oil Co. No. 6-W Jacob, Faddin Sur. Cg. 727 ft.

Luray Oil Co. No. 11 Glass, Garner Sur. Set csg. 1,000 ft.; W.O.C.

Agua Dulce—Nueces County

Texon Royalty Co. No. 1 Elliff, 466 ft. E line, 2,194 ft. S line tr., Longorio grant. T.D. 6,547 ft.; S.D.

Clara Driscoll—Nueces County

H. M. Reed No. 1 Roper, Lot 12, Blk. "E." sec. 108. Cg. 3,197 ft.

Santa Clara Oil Co. No. 3 Clara Driscoll, Sevier Sur., 697 ft. E line, 1,980 ft. S line, 500-ac. tr., sec. 109, Paul Subd. Drlg. 3,527 ft.

Flour Bluff—Nueces County

Gem Oil Co. No. 1 J. T. Smith, Lots 20 and 21, sec. 47. Prep. spud.

S. Paul No. 1 Moulter, Blk. 16, sec. 41, Encinal Garden tracts. Loc.

Saxet Heights—Nueces County

Callaham Oil Co. No. 1 Best, 5-ac. tr., Ehlers Garden Trs. Sd. 4,086½-91 ft.; set csg. 4,091 ft.; S.D. 4,122 ft.

W. W. Chapman No. 1 Reed, C Blk. 4, Country Club. Sd. 4,070-83 ft.; pulling tbg. to rework.

Genro Drlg. Co. No. 1 Poth, C Blk. 6, Port View Addn. Sd. 4,070-78 ft.; set csg. on bottom; W.O.C.

Grace Oil Co. No. 1 Eden, 10-ac. tr., Ehlers Garden Lots. Set csg. 4,079 ft.; pulling tbg. to rework.

Hamil & Smith No. 1 Johnson, 330 ft. S and E lines tr. T.D. 4,077 ft.; comp. 240 B.P.D.

Harrison et al No. 1 Porcher, Blk. 2, Woodlawn Addn. Top sd. 4,050 ft.; T.D. 4,105 ft.; comp. 80 B.P.D. on 3/16-in. choke.

W. H. McConnell No. 1 fee, 10-ac. tr., Villareal Sur. Sd. 4,051-69 ft.; comp. 328 B.P.D. on 7/32-in. choke.

McGrew et al No. 1 Kelly, 755 ft. N line, midway E and W lines, 9.3-ac. tr. R.U.

W. D. Moore No. 2 Lackey, 250 ft. NE line, midway SE and NW lines, 14.51-ac. tr. R.U.

Morgan Bros. No. 2 Bender, Blk. C, Harbor View estates. Drlg. 2,026 ft.

W. N. Paul No. 2 Schallert, cen. Blk. "C," Harbor View Addn. Set surf. csg. 500 ft.; W.O.C.

Pedernal Oil Co., No. 3 Prlour, Blk. 12, Oak Park Addn. Set sur. csg. 500 ft.; W.O.C.

Federnal Oil Co. No. 1 P. J. M. Roy Co., cen. Blk. 14, Oak Park Addn., Villareal Sur. Set csg. 4,084 ft.; S.D.

Port O. & G. Co. No. 5 Cohen, 14.8-ac. tr. S.D. 4,063-75 ft.; set csg. 4,085 ft.; W.O.C.

Port O. & G. Co. No. 3 Country Club Pl., C Lot 31, C.C. Pl. Addn. Perf. 4,074-80 ft.; comp. 196 B.P.D.; T.D. 4,084 ft

Port O. & G. Co. No. 7 Country Club Pl., cen. Lot 62, Oak Park Addn. Drlg. 1,862 ft.

D. W. Powers No. 1 Coleman, Lot 29, Country Club Pl. Drlg. 2,659 ft.

J. D. Proctor No. 1 Simonton, 100 ft. E line, 68 ft. N line, 1-ac. tr., Lots 46 and 47, Country Club Place. Drk.

H. M. Reed No. 1 Prlour, C 7-ac. tr., Blk. 12, Bancroft farm lots. Loc.

Renwar Oil Corp. No. 1 Guaranty Title & Trust Co., Lot 9, Blk. 12, Villa Gardens. Perf. 4,084-86 ft.; S.D.

Renwar Oil Corp. and Maryland Corp. No. 1 Meany, 330 ft. N and E lines tr. R.U.

Richardson Pet. Co. No. 3 Prlour, cen. Lot 13, Oak Park Addn. Drlg. 2,267 ft.

Rupert Cox No. 1 Lawrence, 330 ft. N and E lines, 32-ac. tr. Comp. 104 B.P.D. on ¼-in. choke; sd. 4,050-56 ft.

Saxet Oil Co. No. 2 Walker, Lot 16, Ellendale Gardens No. 1. Set sur. csg. 500 ft.; W.O.C.

Taylor Ref. Co. No. 3 Corpus Christi Golf and Country Club. 73-ac. tr. Sd. 4,074-78 ft.; drlg. pluga.

Taylor Pet. Co. No. 1 McBride, 660 ft. W No. 1 Robinson. Loc.

Taylor Ref. Co. No. 1 Robinson, 10-ac. tr., Villareal Sur. Sd. 4,082-89 ft.; comp. no gauge; C.P. 390 lbs.

W. A. R. Oil Co. No. 2 Dunn, 8½-ac. tr., Villareal Sur. Perforating 4,070-76 ft.

Westgate Oil Co. No. 10 Sturm estate, Villareal Sur. Drlg. 3,693 ft.

Saxet—Nueces County

R. B. Bryant No. 1 Fred Frank, 330 ft. S and E lines, Share C, Frank Partition, sur. 416. R.U.

R. B. Bryant No. 1 Scoggins, 330 ft. N and W lines, 20-ac. tr., Sur. 315. Drlg. 1,147 ft.

Paul Benedum (H. D. Carpenter) No. 1 Harmon, 330 ft. S and E lines, 50-ac. tr., G. Frank Sur. 416. Sd. 5,827-35 ft.; cutting stuck drl. pipe at 4,000 ft.

W. W. Chapman No. 2 Humphrey, 660 ft. No. 1, 20-ac. tr., Stevens Sur. Drlg. 4,962 ft.

Chapman, trustee No. 3 Morgan Clark, sec. 405. Sd. 5,802-26 ft.; set csg. 5,832 ft.; perf.; comp.; no gauge.

W. W. Chapman No. 5 Morgan-Clark, 1,650 ft. S line, 330 ft. E line, NE¼, sur. 405. M.I.M.

Conroe Drlg. Co. No. 3 Bliss, 330 ft. N and W lines, 105-ac. tr., Stevens Sur. Perf. csg. 5,825-29 ft.; T.D. 5,830 ft.

Conroe Drlg. Co. No. 4 Bliss, 330 ft. S and W lines, 105-ac. tr., Stevens Sur. Drlg. 2,047 ft.

Conroe Drlg. Co. No. 1-D Rand Morgan, 330 ft. S and E lines, W½ NW¼, sec. 405. Sd. 4,084-88 ft.; S.O. testing.

Glicrease Oil Co. No. 2 Sullivan, 330 ft. N line, 990 ft. E line, 140.13-ac. tr., Gallagher Sur. Cg. 3,997 ft.

Tom Graham No. 1 Harmon, 330 ft. N and E lines, 34-ac. tr., Sur. 416. Set csg.; T.D. 5,824 ft.; W.O.C.; sd. 5,823-24 ft.

Great States Oil Corp. and Violet Oil Co. (C. Andrea) No. 1 McGregor-Belk, 330 ft. N line, 367 ft. W line, lease, Sur. 311. Sd. 5,814-18 ft. Drlg. plugs.

Great States Oil Corp. and Violet Oil Co. No. 3 McGregor-Belk, 676 ft. E line, 330 ft. N line, 73.5-ac. tr., Sur. 311. Set sur. csg.; W.O.C.

Great States Oil Corp. and Violet Oil Co. No. 4 McGregor-Belk, 330 ft. S and W lines lease, Sur. 311. Spudded.

Great States Oil Corp. No. 3-G Morgan, Sur. 403. Spudded and set sur cs.

Hiawatha Oil Co. No. 1 Morgan, 330 ft. S and E lines, Sur. 405. Cutting old tbg.; cleaning hole.

W. B. Hinton No. 2 Cole, 990 ft. E line, 330 ft. S line, 60-ac. tr. Sd. 4,838-67 ft.; perf. csg. 4,404-09 ft.; comp.; no gauge.

Houston Oil Co. No. 1-A fee, 330 ft. S and E lines of tr. T.D. 5,823 ft.; testing.

Houston Oil Co. No. 6 McGregor, 137.59-ac. tr., Sur. 582. Drlg. hd. sh. and sheils 4,545 ft.

Houston Oil Co. No. 12 Morgan, 330 ft. S and W line lease, sec. 7, Range 5. Drlg. sh. 1,018 ft.

Mills Bennett Prod. Co. No. 1 Kassner, 990 ft. S line, 330 ft. E line, 100-ac. tr., SE¼ Sur. 409. Cg. 3,632 ft.

North Star Oil Co. No. 3 Humphrey, Stevens Sur. Drlg. 4,817 ft.

North Star Oil Co. No. 3 Rand Morgan, 330 ft. E line, 1,650 ft. S line, W½, SE¼ sec. 405. Sd. 5,786-5,822 ft.; comp. 196 B.P.D. on ½-in. choke; T.D. 5,835 ft.

North Star Oil Co. No. 4 Rand Morgan, 330 ft. N and E lines lease, Sur. 405. Sd. 5,789-5,833 ft.; perf. 5,820-34 ft.; comp.; no gauge.

North Star Oil Co. No. 7 Rand Morgan, 990 ft. S line, 330 ft. W line, SE¼, sec. 405. Drlg. 5,517 ft.

Oso Drillers, Inc., No. 4 Roark, 660 ft. E line, 1,200 ft. S line, 106-ac. tr. Pits.

Pan American Pet. Corp. No. 2-C Rand Morgan, 160-ac. tr., Sur. 405. Sd. 5,781-5,824 ft.; comp.; no gauge; T.D. 5,824 ft.; C.P. 1,200 lbs.

Pan American Prod. Co. No. 1-F Rand Morgan, 330 ft. S and E lines, NW¼, sec. 405. T.D. 5,888 ft.; S.D.

Phillips Pet. Co. No. 4 Hutchins, Blk. 29, Sheppard Farm Tracts. Drlg. 4,037 ft.

Phillips Pet. Co. No. 2 Rand Morgan, 330 ft. N and E lines, E½, SE¼, Sur. 405. Drlg. 4,639 ft.

Phillips Pet. Co. No. 3 Morgan, 330 ft. N and W lines, 60-ac. tr., Sur. 405. Drlg. 2,863 ft.

Phillips Pet. Co. No. 4 Morgan, 193 ft. W line, 330 ft. S line, 60-ac. tr., Sur. 405. Derrick.

Phillips Pet. Co. No. 6 Morgan, 990 ft. N line, 330 ft. W line, 60-ac. tr., Sur. 405. R.U.

Renwar Oil Corp. No. 2 Rand Morgan, 990 ft. W line, 330 ft. N line, 80-ac. lse., Sur. 315. Sd. 4,438-44 ft.; tested little oil; retesting; T.D. 4,449 ft.

Richardson Pet. Co. No. 2 Harrell, 330 ft. N and W lines, Blk. 33, Sheppard Farm Lots. Drlg. 4,431 ft.

Richardson Pet. Co. No. 1 Quiros, Blk. 39, Sheppard Farm Lots. Sd. 5,832-50 ft.; set csg. 5,866 ft.; W.O.C.

Sinclair Prairie Oil Co. No. 2 Isensee, 330 ft. S and E lines, 80-ac. tr., C. Land Sur. 404. T.D. 6,529 ft.; S.D orders

Southern Minerals Corp. No. 8 Bliss, 120-ac. tr., J. W. Stevens Sur. 406. Sd. 5,799-5,826 ft.; comp.; no gauge; C.P. 1,100 lbs.

Southern Minerals Corp. No. 9 Bliss, 330 ft. N and W lines, S 120-ac. tr., Stevens Sur. Sd. 5,799-5,835 ft.; set csg.; W.O.C.

Southern Minerals Corp. No. 12 Bliss, 120-ac. tr., Stevens Sur. Sd. 5,805-28½ ft.; set csg. 5,818 ft.; W.O.C.

Southern Minerals Corp. No. 13 Bliss, 120-ac. tr., Stevens Sur. Drlg. 5,362 ft.

Southern Minerals Corp. No. 6 Isensee, 330 ft. N line, 990 ft. W line, 235-ac. tr., C. Land Sur. 404. Reaming to make D.S.T. 5,825-34 ft.

Southern Minerals Corp. No. 3 Mastin, 990 ft. S line, 330 ft. E line, 125-ac. tr., G. Frank Sur. 416. Tested oil 5,825-33 ft.; set csg.; W.O.C.

Texon Drilling Co. No. 2 Isensee, 150 ft. N line, 112 ft. W line, 13.44-ac. tr., C. Land Sur. 404. Spudded.

Texon Drlg. Co. No. 2 Kocurek, Ward Sur. 316. Drlg. 3,946 ft.

Wynne Drlg. Co. and J. H. Coker No. 2 Rand Morgan, 330 ft. N and W lines, 20-ac. lse., 469-ac. tr., Sura. 315 and 592. Set surf. csg.; W.O.C.

Warner Quinlan Co. No. 4 Isensee, Blk. 1, Sheppard Farm Lots. T.D.; sd. 4,547 ft.; odor oil.

Plymouth—San Patricio County

Centennial Oil Co. No. 1 State of Texas, Tr. 3, sec. 71. Drlg. 5,376 ft.

Centennial Oil Co. No. 3 State of Texas, Tr. 3, sec. 71. Drlg. 5,031 ft.

Magnolia Pet. Co. No. 8 Corpus Christi Bank, sec. 24. Drlg. 4,126 ft.

Plymouth Oil Co. No. 55-C Welder, 465 ft. S line, 435 ft. W line, sec. 71. T.D. 5,646 ft.; comp. 211 B.P.D.

Plymouth Oil Co. No. 56-C Welder, 466 ft. S and W lines, sec. 49. Set csg. 5,635 ft.; pulled tubg.; prep. run screen and liner.

Plymouth Oil Co. No. 57-C Welder, sec. 71. Set csg. 5,644 ft.; W.O.C.

Plymouth Oil Co. No. 58-C Welder, 236 ft. N line, 1,256 ft. E line, sec. 49. Set csg. 340 ft.; W.O.C.

Sun Oil Co. No. 2 Rossen, 326 ft. E line, 466 ft. N line, Lot 7, sec. 35. Drlg. 3,697 ft.

Sun Oil Co. No. 1 Rountree, 466 ft. N and E lines lse., Blk. 34, Taft Farm Lots. Comp. 171 B.P.D. on 5/32-in. choke; sd. 5,638-44 ft.

Sun Oil Co. No. 2 Rountree, Blk. 34. M.I.M.

Taft Field—San Patricio County

Cage Prod. Co. No. 1 Mayo, Ottman Sur. Set csg. 3,078 ft.; comp. 237 B.P.D.; T.D. 3,981 ft.; sd. 3,962-81 ft.

Cage Prod. Co. No. 3 Mayo, 150 ft. S line, 700 ft. W line, tr., Ottman Sur. R.U.

Conroe Drlg. Co. No. 2 Pullin, 330 ft. N and E lines, 40-ac. tr., Lot 4, sec. 1. Sd. 4,357-61 ft.; comp. 354 B.P.D. on ¼-in. choke through perf. at 3,976-84 ft.

Humble O. & R. Co. No. 5 Mayo, Tabor Sur. Set csg. 3,980 ft.; W.O.C.

White Point—San Patricio County

Earl Calloway No. 1 White Point Dev. Co., 330 ft. E line, midway N and S lines, G. Seguin Sur. No. 5. R.U.

Rio Grande City—Starr County

Fech Oil Co. No. 1-B Frank Doyno, 150 ft. S and E lines, Blk. 2, Tr. 77-A, Porc. 81. Sd. 1,419-65 ft.; tstg.

Moss & Bass No. 2 Doyno, Blk. 3, Tr. 77-A. Sd. 1,419-26 ft.; testing.

Samfordyce—Starr County

Henshaw Bros. No. 3 Guerra, Tr. 254, Por. 29. T.D. 2,900 ft.; S.D.

Porter & Pickens No. 3-B Garcia Land & Cattle Co., 150 ft. S and E lines, N½ tr., W½ Porc. 100. Set csg. 2,833 ft.; perf. 2,802-04 ft.; comp. gasser.

Carolina-Texas—Webb County

E. J. Sawyer No. 2 Webster, 330 ft. S line, 1,980 ft. W line, Sur. 684. D.S.T. 2,113-32 ft., 15 min.; 80 ft. oil and mud and slight flow gas; set csg. 2,118 ft.; W.O.C.

Laurel—Webb County

Smith & Story et al No. 1 Lloyd, Sur. 23. Drlg. 1,560 ft.

Lopez—Webb-Duval Counties

Cole Pet. Co. No. 1 Peters, 330 ft. N and W lines, Sur. 796. Sd. 2,196-2,201 ft.; tested S.W.; drlg. 2,507 ft.

Cox & Hamon (Starr) No. 2 Peal, NE¼. Sur. 796. T. sd. 2,163 ft.; comp. est. 15 B.P.H.

Magnolia Pet. Co. No. 5 Peal, Sur. 72. Comp. est. 12 B.P.H.; sd. 2,131-46 ft.

Magnolia Pet. Co. No. 6 Peal, 330 ft. S line, 1,568 ft. E line, sec. 383. Drlg. 1,500 ft.

Mills Bennett Prod. Co. No. 5 Valadez, sec. 73. Comp. 480 B.P.D.; T.D. 2,166 ft.

Mills Bennett Prod. Co. No. 6 J. Valadez, Sur. 73. Drlg. 1,826 ft.

Mills Bennett Prod. Co. No. 10 Valadez, Sur. 73. Sd. 2,128-42 ft. Comp. 12 B.P.H. on ¼-in. choke.

Mortimer & Springer No. 4 Jesus Lopez, 330 ft. S line, 990 ft. W line, E½, Sh. 10-B, Sur. 73. M.I.M.

Mortimer & Springer No. 2-A Peal, Sur. 72. Sd. 2,140-55 ft.; comp. est. 18 B.P.H.

Mortimer & Springer No. 2-B Peal, W½, Sur. 796. Sd. 2,126-46 ft.; comp. est. 20 B.P.H.

Mortimer & Springer No. 5 A. Lopez, Sur. 111. Cg. 2,132 ft.

Star Dev. Co. No. 2 Peal, 660 ft. E of No. 1, Sur. 796. R.U.

Superior Oil Co. No. 15 Billings, Sur. 109. T.D. 2,263 ft.; comp. 15 B.P.H.

O'Horn—Webb County

Hamil No. 4 Benavides, Hale Subd. T.D. 2,391 ft.; comp. 11 B.P.H.

T. S. Reed No. 1 Benavides, Blk. 249, Hale Subd. D.&A. 4,000 ft.

Starr Dev. Co. No. 1 Benavides, 330 ft. N and W lines, Sur. 173. M.I.M.

Escobas—Zapata County

Texas Co. No. 92 Whitehead, 3,630 ft. S, 35 deg. 20 min. E, N cor. lse., Cerrito Blanco Gr. Cg. sd. 1,723 ft.

Haynes—Zapata County

Geo. Buck No. 3 Haynes, Blk. 4, Haynes Subd. Comp. 40 B.P.D.; T.D. 955 ft.

Geo. Buck No. 6 Haynes, Blk. 7, Haynes Subd. Loc.

Clover Oil & Gas Co. No. 18 Haynes, Blk. 7, Haynes Subd. Comp. 50 B.P.D. T.D. 990 ft.

McKay & Upchurch No. 7 Haynes, Blk. 7, Haynes Subd. Sd. 946-63 ft.; comp. 50 B.P.D. on pump; T.D. 963 ft.

Mid-Continent Pet. Corp. No. 1 Haynes, Blk. 8, Haynes Subd. M.I.M.

Nordan & Morris No. 2-A Haynes, Blk. 3, Haynes Subd. T.D. 1,018 ft.; comp. 50 B.P.D.

Nordan & Morris No. 1-B Haynes, Blk. 7, Haynes Subd Sd. 803-13 ft.; comp. gasser spraying some oil; T.D. 826 ft.

E. C. TEXAS WILDCATS

Anderson County

Gulf Oil Corp. No. 1 Ross, Robt. Irwin Sur., elev. 487 ft. Drlg. 7,530 ft.

Angelina County

T. L. Harris No. 1 fee, 340 ft. S and 400 ft. E of 75-ac. tr., E line Gilliland Sur., 4½ mi. NE of Huntington. M.I.R.

C. D. Neff No. 1 Long Bell Lbr. Co., 3,300 ft. NW and 1,980 ft. NE of J. F. Gilbers Sur., 6½ mi. NW of Huntington. Drk.

W. A. Stone et al 1 Southern Pine Lbr. Co., B. J. Thompson Sur., 8 mi. SE Lufkin; R.U.

Falls County

E. L. Chapman et al No. 1 Grocholski, Drlg. 3,528 ft.

Fannin County

Styles & Smith No. 1 R. Stewman, J. W. Clark Sur., 2 mi. SE Trenton. Spud. and S.D.

Franklin County

Atex Oil Co. No. 1 R. L. Jaggers, J. Humphrey Sur., 1½ mi. NW of Winfield, elev. 398 ft. Drlg. 3,039 ft.

Flannery et al No. 1 Hedrick. S.D.; W.O.; T.D. 4,369 ft.

Virginia Hudson et al No. 1 B. M. Patterson, E. Rice Sur., 3½ mi. SW of Hagersport. Drk.

R. B. & H. Oil Co. No. 1 Phillips, Wm. Birdwell Sur. Top sd. 4,294 ft.; S.D. 4,330 ft.

Stroube & Stroube No. 1 B. Norman, M. E.P.&P. Sur. Drk.

Grayson County

Olson Drlg. Co. No. 1 Southwestern Life Ins. Co., J. C. Jamison Sur., 6 miles NW of Denison. Elev. 767 ft.; set whipstock 901 ft.; T.D. 5,980 ft.; P.B. to 4,400 ft.; drlg. 4,580 ft.

Henderson County

McDougal et al No. 1 E. Price, M. Mathews Sur., 4 mi. S of Trinidad. S.D. 50 ft.

Hopkins County

Beck Bros. No. 1 H. J. Smith, B. Merchant Sur. but in J. H. Clifton Sur. Loc.

D. Hager et al No. 2 Worsham, A. O Wetmore Sur. Top Georgetown 3,680 ft.; drlg. 4,152 ft.

Hunt County

Penn Oil Corp. et al No. 1 A. B. Manning, 5 mi. NE of Lone Oak, S. Owens Sur. Drk.

Kaufman County

Lester & Duffield No. 1 D. C. Baron, J. T. Taylor Sur., 8 mi. NE of Elmo. Drlg. 5,506 ft.

Lamar County

Abercrombie & Harrison No. 1 C. M. Terrell, 4⅛ mi. SE of Paris. Drlg. 1,111 ft.

Nacogdoches County

J. C. Bonhan et al No. 1 Angelina Lbr. Co., 108 vrs. S and 103 vrs. E from SE cor. of M. B. Thomas 150-ac. tr. in J. Gomez Sur., 14 mi. SE of Nacogdoches. Drk.

Red River County

D. Sneed et al No. 1 Hocker-Hughes. S.D. 1,150 ft.

Williams et al No. 1 L. and O. Roberts, James Bankston Sur., 2 miles NE of Annona. Elev. 396 ft.; S.D. 1,596 ft.

Robertson County

J. B. Mills No. 1 T. Congelosi, C of 75-ac. tr. in G. A. Nixon Sur., 3½ mi. SW of Hearne. S.D. 325 ft.

Rockwall County

Rockwall Drlg. Co. No. 1 Loffland, M. B. Jones Sur. Elev. 419 ft.; S.D. 1,516 ft.

Rusk County

John W. Merritt No. 1 J. A. Stallings, T. Uzzell Sur., 2½ mi. S of East Texas field. Drk.

Smith County

Carolyn et al No. 1 Bennett-EW, Robt. Walters Sur., 3 mi. NE of Winona. S.D. 100 ft.

Upshur County

B. G. Barnett No. 1 G. T. Askew, J. W. Oliver Sur., 4 miles NW of Big Sandy. Drlg. 3,616 ft.

B. L. Watson No. 1 W. O. Irwin, 2,500 vrs. from SW and 700 ft. from NW. D. Cannon Sur., NE cor. of county. Drk.

EAST TEXAS

(Border Counties)

Bowie County

Ferguson & Hill No. 1 A. Y. Breckenridge, N. Dycus Sur. 10-in. set 60 ft.; W.O.C.S.

Woodley & Bentley and J. D. Lumpkin No. 1 John McDermott. Drlg. 3,750 ft.

Cass County

American Liberty Oil Co. No. 1-B Baughs, J. H. Rives Sur. Cmt. 10-in. 1,958 ft.; W.O.C.S.

American Liberty Oil Co. No. 1-D Baughs, J. H. Rives Sur. Drlg. 1,852 ft.

American Liberty Oil Co. No. 1 G. Stephens, 330 ft. N and 1,020 ft. E. SW cor. J. Garaner Sur. Cg. 5,980 ft.

Lide, Greer & Brown No. 1 Baugus, 150 ft. N and E. from NE cor. Lot 12 in J. H. Rives Sur. Drlg. 5,835 ft.

Herman L. Brown No. 7 R. P. Willis, Robt. Trammel Sur. Drk.

W. F. Lacey et al No. 2 Baughs, J. H. Rives Sur. Drk.

Magnolia Pet. Co. No. 1 J. E. George, J. Collom Sur., SE cor. E. E. Hall 60-ac. tr. Drlg. 3,263 ft.

Magnolia Pet. Co. No. 2 J. E. George, NE cor. John Collum Sur. Loc.

Magnolia Pet. Co. No. 3 J. E. George, SW cor. John Collum Sur. Loc.

Magnolia Pet. Co. No. 4 J. E. George, NE cor. 141-ac. lse., John Collum Sur. Loc.

Magnolia Pet. Co. No. 4 A. S. Hall, J. Collom Sur., 544 ft. S of N line, 1,250 ft. E of W line, E. E. Hall tr. 16-in. set 2,020 ft.; T.D. 2,050 ft.; W.O.C.S.

Magnolia Pet. Co. No. 5 A. S. Hall, J. Collom Sur., 532 ft. S of N line and 440 ft. W of E line of E. E. Hall 60-ac. tr. Drlg. 3,428 ft.

Magnolia Pet. Co. No. 6 A. S. Hall, NW cor. 60-ac. lse., John Collom Sur. T.D. 2,055 ft.; W.O.C.S.

Magnolia Pet. Co. No. 7, NW cor. 60-ac. lse., John Collom Sur. Drlg. 1,907 ft.

Magnolia Pet. Co. No. 2 W. M. Hall, SE cor. Wilson Robinson Sur. Drlg. 3,524 ft.

Magnolia Pet. Co. No. 4 Haywood, SW cor. Haywood Tr., John Collum Sur. Loc.

Magnolia Pet. Co. No. 1 J. J. Moore, J. Collom Sur., 330 ft. N, 418 ft. W, SE cor. of 118-ac. tr. Drlg. 2,024 ft.

Magnolia Pet. Co. No. 3 Rives, NE cor. John Collum Sur. R.U.

Magnolia Pet. Co. No. 4 Rives, NE cor. John Collum Sur. R.U.

Magnolia Pet. Co. No. 5 Rives, SE cor. John Collum Sur. Loc.

Marathon Oil Co. No. 2 R. P. Willis, 1,039 ft. S of No. 1, S.F.I.W. Sur. Drlg. 1,250 ft.

Marathon Oil Co. No. 3 R. P. Willis, 660 ft. S of Superior A-1 Chew, S.F.I.W. Sur. Loc.

R. W. Norton No. 2 A. S. Hall, NE cor. A. S. Hall tr., James Young Sur. 7-in. cmtd. 5,972 ft.; W.O.C.S.

R. W. Norton No. 3 A. S. Hall, NW cor. E. E. Hill 60-ac., John Collom Sur. Cg. 6,020 ft.

R. W. Norton No. 2 Mary Rives, John Collom Sur. Cg. 6,003 ft.

R. W. Norton No. 1 J. T. Moore, Wm. R. Myers Sur. 13-in. cmtd. 251 ft.; W.O.C.S.

Phillips Pet. Co. No. 1 Wartzbaugh, Robt Trammel Sur., 431 ft. S of N line and 490 ft. W of E line, 16-in. cmtd. 255 ft.; W.O.C.S.

Phillips Pet. Co. No. 2 Wartzbaugh, Robt. Trammel Sur., 134 ft. S of N line and 496 ft. W of E line. Loc.

Showers & Moncrief No. 5 T.H. and Sallie Stalcup, Robt. Trammel Sur. Drk.

Showers & Moncrief No. 7 T. H. and Sallie Stalcup, 1,714 ft. S, 167 ft. W. NE cor. 62-ac. tr., Robt. Trammel Sur. Drlg. 5,502 ft.

Showers & Moncrief No. 2 T. D. and Sallie Stalcup, Robt. Trammel Sur., 330 ft. N line, 354 ft. E line. Drlg. 4,470 ft.

Showers & Moncrief No. 3 T. D. and Sallie Stalcup, Robt. Trammel Sur., 330 ft. N and W lines. Drlg. 3,304 ft.

Showers & Moncrief No. 4 T. D. and Sallie Stalcup, Robt. Trammel Sur., 330 ft. S and W line. Drlg. 3,348 ft.

Showers & Moncrief No. 6 T. D. and Sallie Stalcup, Robt. Trammel Sur., 330 ft. S and 1,338 ft. W line. Loc.

Showers & Moncrief No. 8 T. D. and Sallie Stalcup, Robt. Trammel Sur., midway between E and W line of lse. Loc.

Superior Oil Co. No. 1 Susie Chatten, SE cor. H. Holbert Sur., in Wm. R. Myers Sur. 7-in. cmtd. 5,935 ft.; W.O.C.S.

Superior Oil Co. No. 1-A Chew, SW cor. Robt. Trammel Sur. Drlg. 5,479 ft.

Superior Oil Co. No. A-2 Chew, 466 ft. N and W SE cor. 108-ac. lease, Robt. Trammel Sur. Drlg. 1,340 ft.

Superior Oil Co. No. A-3 Chew, Robt. Trammel Sur., 1,399 ft. N, 466 ft. W, SE cor. 108-ac. tr. R.U.

Superior Oil Co. No. A-4 Chew, 1,263 ft. N, 466 ft. E. of SW cor. 108-ac. tr. Drk.

Texas Co. No. 3 E. E. Hall, 563 ft. S No. 1, James Young Sur. Drlg. 4,797 ft.

Tide Water No. 1 Chew, Robt. Trammel Sur., 150 ft. N of S line, midway between E and W lines of 20-ac. lease. Loc.

Tide Water No. 1 Chew, on 55-ac. tr., Robt. Trammel Sur. Loc.

Tide Water No. 2 Chew, Robt. Trammel Sur., 20-ac. tract. Loc.

Tide Water No. 2 Chew, on 55-ac. tr., Robt. Trammel Sur. Loc.

United Prod. Corp. No. 2 E. J. Cunningham, on Wilson Robinson Sur. P.B. to 5,978 ft.; tstg.

United Prod. Co. No. 3 J. R. Jones, Ben J. Murray Sur. Loc.

United Prod. Corp. No. 2 E. Tyson Unit, J. H. Rives Sur. Comp.; flw. 16 B.P.H.; ¼-in. tbg. ck.; T.D. 6,050 ft.

United Prod. Corp. No. 3 F. S. Simpson, 557 ft. N, 440 ft. W, SE cor. 160-ac. tr., James Young Sur. Drlg. 5,023 ft.

United Prod. Corp. No. 2 J. T. Stewart, J. Collom Sur., 529 ft. N, 440 ft. E. SW cor. J. T. Stewart tr, Drlg. 5,838 ft.

United Prod. Corp. No. 3 J. T. Stewart, J. Collom Sur., 544 ft. N and 1,250 ft. E, SW cor. J. T. Stewart tr. Drlg. 5,-437 ft.

United Prod. Corp. No. 4 J. T. Stewart, J. Collom Sur., 532 ft. N, 2,060 ft. E. SW cor. 61-ac. tr. Drlg. 5,260 ft.

United Prod. Corp. No. 5 J. T. Stewart, J. Collom Sur., 536 ft. N, 615 ft. E. SW cor. Mack and J. T. Stewart tr. Drlg. 5,454 ft.

United Prod. Co. No. 6 J. T. Stewart, John Collom Sur., 330 ft. S of N line and E of W line of Mack & Stewart 81.9 ac. 13-in. cmtd. 1,870 ft.; W.O.C.S.

Vaughn Prod. Co. No. 4 Willis, S.F.G.W. Sur. SW cor. 9-in cmtd. 2,317 ft.; W.O. C.S.

Harrison County

W. F. Bridewell et al No. 1 Clapp, F. C. Baker Sur. T.D. 2,412 ft.; acid 2,000 gals.; swbd. S.W. only; S.D.O.; may D.D.

Geyer Oil Co. No. 4 Vincent, Chas. Davenport Sur. T.D. 1,100 ft.; D.S. test 990 ft. showed S.W. and 500,000 ft. gas.

Hanover, Bergendoll et al No. 1 Buchanan, Wm. McIlvain Sur. T.D. 4,070 ft.; sidetracking bailer.

Panola County

A. C. Glassell No. 1 Frost Lbr. Industries, SW cor. Mary S. Potts Sur. Drlg. 2,650 ft.

Gulf Oil Corp. No. 1 Pierce & Chesbro, J. H. Shahan Sur. 10-in. cmtd. 1,435 ft.; W.O.C.S.

Logansport P. L. Corp. No. 1 Rushing, M Smith Sur. S.D. 2,659 ft.

Sabine County

L. D. House et al No. 1 Bell, McDonnell Sur. Cg. 2,042 ft.

Shelby County

Farley & Sommer No. 1 Greer, J. English Sur. Skidded old rig 50 ft. west; T.D. 3,100 ft.; S.D.

H. A. Stebbinger et al No. 1 Pickering Lbr. Co., C. E. Henry Sur. T.D. 5,110 ft.; hvy gas showing; tstg.

F. E. Mulroy et al No. 1 C. A. Hayden, in the D.T.F. York Sur. T.D. 572 ft.; S.D.

Potter & Rubeling C. H. Polly No. 1, Wm. Wisner Sur. Drlg. 3,780 ft.

NORTH TEXAS WILDCATS

Archer County

Archer Drlg. Co. No. 1 L. F. Wilson, sec. 32, A.T.N.C.L. Sur. Loc.

L. T. Burns No. 1 M. E. Durham, J. W. Harris Sur., sec. 52. Loc.

Continental Oil Co. No. 1 S. H. Melugin, Lot 40, Clark & Plumb Sur. Loc.

Bob Elmore No. 1 O. L. Kunkel, T.E.&L. Sur., sec. 2,419. Drlg. 1,000 ft.

Fraser & Proctor No. 1 Langford. Blk. 135, Harris Subd. Drlg. 1,675 ft.

Clay County

Carl Purcel No. 3 Stine "D," sec. 7, P.C. S.L. Sur. Drlg. 1,900 ft.

Collin County

California Consld. Oil Co. No. 1 Fagg, Jas. Rutherford Sur. Spud and S.D.; wtr.

Port Bolivar O. & R. Co. No. 1 Durning, Wm. Creegar Sur. S.D. 4,065 ft.

Port Bolivar O. & R. Co. No. 1 A. Sherley, G. Starke Sur. Loc.

Sorrell et al No. 1 D. R. Clark, J. Rowland Sur. Drk.

Cooke County

Cain & Chandler No. 1 J. B. Burch, J. M. Williams Sur. A-658. S.D. 1,956 ft.

Hill Christian No. 1 J. T. Donald, J. Guffey Sur. A-1,545. Sd. 2,655-72 ft.; sd. 2,890-2,900 ft.; shot 50 sticks and C.O. and tstg.

C. C. Harwell & Co. No. 1 H. G. Proffer, T. E. Hardaway Sur. A-464. Drlg. 710 ft.

Homarado Oil Co. No. 1 H. D. Field, J. B. McClyman A-735. 6⅝-in. 1,216 ft.; W.O C.; C.O.

W. M. Johnson No. 1 G. M. Smith, J Boyle A-88. S.D. 275 ft.

Keil et al No. 1 C. M. Martin, E. Reed Sur. A-849. Spudded.

Lanier et al No. 1 Norman, J. Bush Sur. A-107. Drk.

A. N. Landes No. 1 Mrs. O. Wilson, E. Reed Sur. Drlg. 615 ft.

Long & Wolf No. 1 Hopkins, B.B.B.&C. Sur. A-150. Spudded.

Mullins & Weil No. 1 Rose T. Hardeway Sur. A-464. Set 6⅝-in. 1,936 ft.; O.S. 1,-936-42 ft.; tstg.

Nair Oil Corp. No. 1 England, J. C. McElroy A-711. S.D. to standardize.

E. R. Robison No. 1 J. Krebs, H. Wilkey Sur. A-1,090. Drlg. 1,500 ft.

Sinclair Prairie Oil Co. et al No. 2 A. C. McCall, H. White Sur. A-1,134. Cellar.

Ungerman et al No. 1 W. Reid, F. Earthman Sur. A-849. Drlg. 1,511 ft.

Wertheimer et al No. 1 W. A. Erwin, J Armendaris Sur. A-1,234. Drlg. 705 ft.

Whitehead et al No. 1 Lynch, A. Edmiston Sur. A-353. Loc.

Denton County

C. S. Hoad No. 1 Travelers Insurance Co Wm. A. Thompson Sur. A-1,238. S.D 1,860 ft.

Manning & Moore No. 1 E. L. Darnell, T Walters Sur. A-1,329. 6⅝-in. cem. 2,167 ft.; tested S.G.; S.D.O.

Grayson County

Olse Bros. Drlg. Co. No. 1 Southwestern Life. Drlg. plug 4,450 ft.; T.D. 5,774 ft.; crooked hole.

Pete Shaner No. 1 Blair, R. H. Deavers Sur. A-313. S.D. 2,000 ft.; repairs.

Jack County

W. H. Hammon No. 1 G. E. Evett, H. Plaster Sur. Drlg. 1,575 ft.

Harper Pet. Corp. No. 1 G. F. Brown, S. M. Holderness Sur. A-1,532. Drlg. 750 ft.

C. Kadane No. 1 E. F. Smith, S.P.R.R. Sur. A-522. Drlg. 2,120 ft.

States Oil Corp. No. 1 J. Lowe, J. Hughson Sur. A-256. S.D. 3,470 ft.

Sternteax Oil Co. No. 1 Boyd, J. N. Wright Sur. A-898. S.S.O. 3,370-82 ft.; S.D.O.

Montague County

Clark-Beckner No. 1 C. W. Bell, sec. 6, M.E.P.&P. Sur. Drk.

T. P. Frost No. 1 Johnson, sec. 6, E.T. R.R. Spudded and S.D.

L. C. Heydrick No. 1 Cliff Dowd, G. W. Browning Sur. A-1,274. Spud. & S.D.

Jim Seeds et al No. 1 Coomba, sec. 54 M.E.P.&P. Sur. S.D.O. 2,340 ft.

Sinclair Prairie Oil Co. No. 1 Holt Est., Blk. 45, K.C.S.L. Sur. Drlg. 3,605 ft.

Wichita County

A. E. Blair No. 1 Cody Est., sec. 311, Waggoner Col. Subd. Loc.

W. F. Hamilton No. 1 W. T. Waggoner, S. Holloway Sur. A-533. Drlg. 1,500 ft.

Pete Harmon et al No. 1 J. B. Jamison J. Deck Sur. A-52. Drlg. 2,200 ft.

Melat & Graham No. 1 Munger, Blk. 25, K.W.V.F.V. Sur. Drlg. 2,105 ft.

J. M. Morton No. 1 Housler, J. C. Pike. A-509. Drlg. 2,807 ft.

Wilbarger County

Fain-McGaha No. 1 Waggoner-NN, sec. 37, H.&T.C. Sur., Blk. 4. Drlg. 500 ft.

Webb & Rogers No. 1 Mrs. D. Coffee, sec. 44, H.&T.C., Blk. 15. Spudded.

Young County

S. Caprito No. 1 Mrs. N. Laquey, A. Irvin Sur. A-1,779. Drlg. 1,700 ft.

Art Cox No. 1 J. T. Rogers, J. Ray D-1,628. Drlg. 2,010 ft.

W. D. Eastland No. 1 A. R. Manning, T.E &L. Sur. 3,412. Fsg. 2,015 ft.

Rathke Oil Co. No. 1 O. W. Hill, J. C. Graham Sur. A-122. Drlg. 2,800 ft.

Rathke Oil Co. No. 2 J. T. Rogers, S. H. Graham Sur. A-124. T.D. 3,912 ft.; rng. 5 3/16-in.; tstg.; est. 15 bbls.

Yorktex Pet. Co. No. 1 F. G. Burnett, G W. Hills Sur. A-151. Drlg. 2,610 ft.

WEST TEXAS WILDCATS

Andrews County

Grisham Hunter Corp. No. 1 Ratliff & Bedford. T.D. 1,320 ft.; pulling csg.

Borden County

Moore Bros. No. 1 Clayton-Johnson, sec. 20, Blk. 32, Twp. 4n, T.&P. Sur. T.D. 365 ft.; C.O.

Brewster County

F. C. Dodson No. 1 Texas American Synd., sec. 66, Blk. 10, G.H.&S.A. Sur. U.R. csg.; S.S.O. 2,535 ft.; drlg. 2,845 ft.

Toney Hess No. 1 Mary Deal, sec. 7, Blk. 1, G.T.R.R. Sur., 7 mi. NW of Marathon. Spud and S.D.

Cochran County

Cascade and Honolulu Oil Corp. No. 1 E B Duggan, cen. Labour 13, League 55, Oldham County Sch. Ld. Drlg. 2,351 ft.

Concho County

J. W. Westbrook No. 1 Ledbetter. S.D. 3,502 ft.

Crane County

Big Basin Oil Corp. No. 1 Cowden. S.D. 3,014 ft.

Gulf Oil Corp. No. 2 W. N. Waddell, sec. 18, Blk. B-21. Drlg. 5,300 ft.

Gulf Oil Corp. No. 2 Tubbs, sec. 12, Blk. 27-B. S.D. 4,227 ft.; to set csg.

Gulf Oil Corp. No. 2 McKnight, sec. 9, Blk. B-21. Drlg. 2,300 ft.

Loffland Bros. No. 2 Tubbs, sec. 9, B-27. S.D. 3,535 ft.

Moore Bros. No. 1 Barnsley, sec. 43, Blk. 32, P.S.L. Sur. Drlg. 5,470 ft.

Ector County

Continental Oil Co. No. 1 Edwards, 330 ft. S and W of sec. 32, Blk. 44, 3s, T.&P. Sur. Drlg. 288 ft.

Empire G. & F. Co. No. 1-C Cummins, sec. 22, Blk. 45, Twp. 1n, T.&P. Sur. Spudded.

Grisham-Hunter Corp. No. 1 R. B. Cowden, C of SE¼, sec. 10, Blk. 45, Twp. 2n, T.&P. Sur. S.D. 4,211 ft.

Sinclair Prairie No. 1-A Johnson, sec. 42, Blk. 42, Twp. 1s, T.&P. Sur. Drlg. 2,878 ft.

York & Harper No. 1 Slater, sec. 26, Blk. 45, Twp. 1s, T.&P. Sur. Spudder.

York & Harper No. 1 York. Drlg. 861 ft.

Edwards County

M. I. Phillips & Miers No. 1 Turney, sec. 164, C.C.S.D.&R.G.N.G. Sur. Drlg. 415 ft.

Plateau Oil Co. No. 1 Hatch, C SE SW¼ sec. 66, Blk. B, H.E.&W.T. Sur. Cellar.

Fisher County

L. A. Daniels et al No. 1 J. J. Nickless T.D. 552 ft.; skidded rig.

Ellis & Eubanks No. 1 C. C. Wourland, sec. 15, Blk. 21, T.&P. Sur. T.D. 2,975 ft.; U.R. csg.

Forest Dev. Co. No. 1 A. M. Dry, sec. 108, Blk. 2, H.&T.C. Sur. Drlg. 3,934 ft.

Gaines County

Humble O. & R. Co. No. 1 W. Eubanks, sec. 6, Blk. AX. Drlg. 5,422 ft.

Landreth Prod. Co. No. 1 Kirk, sec. 33 A-21. T.D. 4,870 ft.; P.B. 4,855 ft.; R.U. pumping equipment.

Stanolind O. & G. Co. No. 1 D. Davis, 1,980 ft. from S and E, sec. 18, Blk. A-21. Drk.

Garza County

Brown Eagle Oil Co. No. 1 Sullivan, sec. 3, S. C. Harper Sur., Blk. H. Top pay 2,772 ft.; T.D. 2,840 ft.; putting on pump; swbd. 120 bbls. day.

Gartex Oil Co. No. 2 Post Est., 2,240 ft. N and 345 ft. E, sec. 6, Blk. 5, K. Aycock Sur. Material.

Glasscock County

California-Honolulu Oil Corp. No. 1 Calverley, sec. 25, Blk. 35, Twp. 3s, T.&P. Sur. Drlg. 315 ft.

F. Dodson et al No. 1 Carter heirs, sec. 8, Blk. 33, Twp. 3s, T.&P. Sur. Drlg. 1,579 ft.

Hockley County

Texas Co. No. 1 B. Slaughter, Labour 83, League 38, Zavala Co. Sch. Lds. Drlg. 1,406 ft.

Hudspeth County

Hayman Krupp Oil & Land Co. No. 1 Thaxton, sec. 34, Blk. 74, Twp. 6, T.&P. Sur. S.D. 1,150 ft.

Jones County

Archer Drlg. Co. No. 1 Berryhill, 200 ft. S and W, Lot 7, L. Moore Sur. No. 1. Drlg. 222 ft.

Dobbs Oil Co. No. 1 McCreight, sec. 14, O.A.L. Sur. Drlg. 2,300 ft.

P. E. Glenn No. 1 Carlton, Subd. 26, McMullen & McGloin Sur. Pits.

H. C. Owens et al No. 1 H. Arnwine, N½ sec. 69, B.B.B.&C. Sur. T.D. 100 ft.; set csg.

Owens-Snebold Oil Corp. No. 1 Jones, McKissic Sur. No. 204. Drlg. 2,100 ft.

Oyster & Barnes No. 1 King, Scott Sur. No. 16, 1 mi. S of Lueders. Loc.

Parker No. 1 C. L. Brown, sec. 9, Blk. 2 T.&N.O. Sur. C.O. 2,350 ft.

J. L. Reeves No. 1 Kelly, C. Martinez Sur., 1½ mi. N of Hawley. Rig.

Kimble County

Wilcox O. & G. Co. No. 1 H. Spiller, sec. 15, Brooks & Burleson Sur., Abst. 80. Drlg. 1,023 ft.

Pecos County

Anderson Oil Co. No. 1 White & Baker, 330 ft. SW cor. sec. 32, Blk. Z, T. C. Sur. Drlg. 440 ft.

Cardinal Oil Co. No. 1 White & Baker, 2,310 ft. S and 330 ft. E, sec. 37, Blk. Z, T.C.R.R. Sur. Drlg. 58 ft.

E. R. Minshall, No. 1 Banker, sec. 25, Blk. 146, T.&St.L. Sur. T.D. 1,600 ft. U.R. csg.

Tex-Mex Oil Co. No. 1 McKee, Tr. 7, sec. 24, Blk. 9, H.&G.N. Sur. Set csg.; drlg. 522 ft.

S. Thompson No. 1 Elsinore Cattle Co., sec. 54, Blk. D, G.C.&S.F. Sur. Drlg. 2,223 ft.

Presidio County

Lindeman Bros. Oil Corp. No. 1 J. R. Bledsoe & Badgley, sec. 15, Blk. 351, G.C.&S.F. R.R. Co. Sur., 2½ mil. NE of Presidio. T.D. 1,660 ft.; to drill ahead.

Schleicher County

J. W. Cooper No. 2-B Page, 660 ft. N and E of SE¼ sec. 40, Blk. L, G.C.&S.F. Sur. Pits.

Magnus Oil Co. No. 1 Judkins & Spencer, C SW¼ sec. 4, W. W. Russell, grantee. Elev. 2,209 ft.; S.G. 4,350 ft.; gas sd. 4,956-58 ft.; T.D. 6,527 ft.; P.B to 5,779 ft.; S.D.

Taylor County

Illinois Pet. Co. No. 1 Mrs. G. A. Bigham, W¼ sec. 29, Guadalupe Co. School Lands Sur. T.D. 2,175 ft.; set csg.

A. R. Forrester No. 1 O. A. Preacher, sec. 14, Blk. 86, J. B. Shipman Sur. T.D. 2,152 ft.; to set csg.

Terry County

J. A. Estes No. 1 F. B. Graham, sec. 33, Blk. T, O.&W.R.R. Sur. S.D. rep. mch.

Uscan Oil Co. No. 1 Brownfield, C N¼ sec. 54, Blk. K, P.S.L. Sur. Spudder.

Ward County

P. Moran et al No. 1 Reynolds, sec. 11, Blk. 5, H.&T.C. Sur. S.D. 850 ft.

Philtop O. & G. Co. No. 1 Pure-Smith, 990 ft SE and 330 ft. SW, sec. 26, Blk. 34, H.&T.C. Sur. Loc.

Winkler County

Bert Fields et al No. 1 Walton, sec. 3, Blk. C-23. Spudded and S.D.

B. Fields et al No. 1 Pure-Cowden, sec. 26, Blk. B-5, P.S.L. Sur. Drlg. 305 ft.

Read & Duffey No. 1 Sealey, sec. 8, Blk. A. G.M.M.B.&A. Sur. Spudded.

Texas Co. No. 1 Holley, sec. 7, Blk. B-11, P.S.L. Sur. T.D. 2,621 ft.; to ream hole.

Yoakum County

Stogner et al No. 1 Roosevelt, sec. 215, Blk. D, John H. Gibson Sur. El. 3,712 ft.; drlg. 4,752 ft.

Southwest Texas Fields

(Continued from Page 117)

Plymouth received two new producers and Taft one. Wildcatting continued the heaviest of that in any county of the area with seven drilling. Included are the Atlantic Oil Producing Co. No. 1 Maryland Trust Co., situated just across the Aransas County line from the Buckingham Oil Co. No. 1 McCampbell. That producer has increased its oil production since completion to 10½ bbls. per hour through a 9/64-inch choke. A new test for the old White Point gas field was also rigging up during the week, and wildcats are drilling north and northwest of the field.

Laredo District

The Laredo district continued fairly active with the greatest center of operations in the Lopez field of Webb and Duval Counties, the Seven Sisters and Loma Novia fields of Duval, and the Haynes field of Zapata County. In Lopez, seven completions were made, of which four were in the newly extended northeast section of the field lying in Duval County. A setback to this section was apparent from the results in the Cole Petroleum Co. No. 1 Peters. This east outpost test located in the northwest corner of Survey 795 cored the Mirando sand at 2,196-2,201 feet, but it tested salt water. The hole will be carried to 3,000 feet. This tends to delimit the field production at that point, but further tests in the area will be necessary for the setting of any definite limits. From the showings of the Luling Oil & Gas Co. No. 1 Peal, and the oil producers to the east of that gasser, the structure of the field should extend beyond a considerable distance into Duval County. This was indicated from the sand contour at that point, the Luling well being the highest in the field.

Duval County fields gained 13 new producers, the greatest number being completed in the Seven Sisters field. Loma Novia was slightly extended to the southward as an edge well of the Bridwell Oil Co., No. 3-B Hubbard was completed. Seven Sisters production was again defined on the southwest by the failure of the Atlantic 7-E Welder, located at the east end of the new southwest field trend in Survey 102.

A greatly increased activity is noted in the Haynes field of Zapata County. Production in this isolated field is found at about 1,000 feet, and several companies are rapidly drilling up leases and bringing in wells with initial productions ranging around 50 bbls. per day.

Several scattered spots in Southwest Texas claimed interest during the week. In Bee County the Pressey No. 1 Hicks which recently opened new gas production was making an increasing amount of oil, at present spraying about 12 bbls. per day. Production was opened in the area west of Lytton Springs in Caldwell County as the Barnett Petroleum Co. No. 1 Strawn was brought in for about 60 bbls. per day, producing from the giant serpentine plug of the old Lytton Springs field. In the Valley, the Shell test in Willacy County found another show of oil. The test bottomed at 7,602 feet is reaming for a test.

Central West Fields

(Continued from Page 112)

ship, Wehrle Brothers have moved a rig on the L. M. Bosser property. In Coal Township, section 25, Kachelmacher estate No. 15 is drilling on the Hemlock Coal Co. property. In section 6, Reading Township, Ohio Fuel Gas Co. has staked a location for No. 2 on the Harriet Beard farm. In section 14, same township, Perry Strum has made a location on the Alice King property.

Ohio Fuel Gas Co. No. 1 A. A. Westfall, section 22, Clinton Township, Wayne County, was drilled through the Clinton at 3,090-3,122 feet with a small show of gas and it has been plugged. Same company has a rig on the Dennis Hiner property in section 29, Chester Township.

In Richland County, section 5, Worthington Township, Ohio Fuel Gas Co. No. 1 A. M. Carsay was drilled through the Clinton sand at 2,432-65 feet and is a commercial gas well. The same operators have staked a new location on the Frances Bowen property in sections 25-26, same township.

Earl Ruby completed a small gas well, drilled for private use, on the Kate Certel farm, in section 1, Jefferson Township, Scioto County. Gas was struck below the Weir sand at 290-324 feet and gauged 10,732 feet. In section 14, Clay Township, Edgar Ruby completed a small gas well on the Earl Ruby farm, which gauged 4,536 feet.

INDIANA

Fourteen completions were reported in the Indiana field and this field is showing increased activity. In Daviess County, section 8, Barr Township, A. T. Spaulding No. 4 Sadie Beck was a commercial gas well. In section 35, same township, Loogootee Light & Fuel Co. No. 3 B. F. McCord with a total depth of 468 feet was dry. D. L. Norris & Co. is drilling on the George O'Brien property.

In Knox County, location 261, Busseron Township, Parker & Loyd No. 1, on the Prather & Walden property, was a commercial gas well. Same operators' No. 2, same farm, was also a gas well. In section 13, same township, Parker & Loyd No. 1 Maude Wolfe had a production of 10 bbls. the first 24 hours. In section 15, same township, O. A. Thayer is drilling No. 4 on the B. H. Yates property. In Widner Township, section 26, H. C. Lord & Co. No. 1 J. B. Sartor was dry; total depth 782 feet.

Nollem Oil & Gas Co. No. 4 M. Hennan estate, section 8, Anderson Township, Perry County, with a total depth of 616 feet, had an initial of 12 bbls. In section 8, same township, Haney & Hollingsworth No. 3 William Kress was dry. In section 30, Clark Township, Zoercher & Dice No. 12 A. Franchville had an initial production of 20 bbls. In section 27, same township, Gardner Oil Co. No. 3 Frank Lanman was a gas well, total depth 168 feet.

In Posey County, section 36, Robinson Township, Marhill Oil & Gas Co. No. 1 Louis Raber was dry; total depth 1,220 feet. In section 2, Mars Township, Kentucky Natural Gas Corp. No. 1 is drilling on the M. Robinson farm.

Wayne Gale No. 2 John Heinze, section 6, Huff Township, Spencer County, had an initial production of 25 bbls.

In Vanderburgh County, section 30, Armstrong Township, J. S. Young, Jr., No. 1 Charles Harrison produced 8 bbls. the first 24 hours. Union Oil Co. No. 1 is drilling on the J. & T. Market lease in section 11, Center Township.

In Vigo County, section 13, Honey Creek Township, A. Hartman completed a dry hole on his own property, total depth 440 feet.

KENTUCKY

In Warren County, 4 miles south of Bowling Green, Ky., Summit Oil Co. No. 1 Tom Smith gauged 100,000 feet of gas at 702 feet.

In Ohio County, Webster Pool, Gealy & Co. No. 2 W. Muffet was dry. In the Oak Pool, Lowman-Daily No. 1 Doc Miller was also a "duster." Mecca Oil Co. No. 12 W. Smith, same county, Smith Pool, had an initial of 40 bbls. after a shot.

Petroleum Co. No. 1 Victor Martin, Livermore district, McLean County, had a production of 45 bbls. Sunflower Oil & Gas Co. No. 1 on the Leeman town lot in Livermore, Ky., produced 20 bbls. the first 24 hours after a shot.

Total runs made from wells served by Illinois Pipe Line Co. in western Kentucky during July were 123,163.03 bbls.

F. C. Fants, vice president of the Midwest Piping & Supply Co. of St. Louis, Mo., attended the Arkansas-Louisiana-Texas division of the Western Petroleum Refiners Association at El Dorado, Ark., on Friday, August 14, and delivered a paper on "Designing and Welding of Piping Systems."

Frank Goss, Houston, Tex., has been appointed superintendent of Humble Oil & Refinery Co.'s refinery at Ingleside, Tex.

GULF COAST WATER SHIPMENTS, JUNE, 1936

Company and terminal—	Crude		Refined		
	Coastwise	Export	Coastwise	Export	Total
Atlantic P. L. Co.:					
Atreco	1,578,240.07	100,833.11	5,437.96	.....	1,684,561.14
Texas City	271,092.16	.....	2,783.84	.....	273,876.00
Harbor Island	625,863.16	.....	.....	.....	625,863.16
Coastal Refineries:					
Port Isabel	920,556.00	42,541.00	89,393.00	.....	1,052,490.00
Gulf Oil Corp.:					
Port Arthur	396,903.94	.....	2,166,697.04	77,915.82	2,641,516.80
Humble O. & R. Co.:					
Baytown	623,889.24	41,850.14	1,945,138.36	559,203.04	3,170,080.78
Harbor Island	2,346,697.18	110,111.49	.....	.....	2,456,808.67
Texas City	629,218.97	.....	.....	.....	629,218.97
Neches	.....	.....	.....	.....	.....
Ingleside	31,838.51	.....	.....	.....	31,838.51
Magnolia Pet. Co.:					
Beaumont	844,518.34	.....	2,169,857.52	.....	3,014,375.86
Pure Oil Co.:					
Smiths Bluff	498,555.00	.....	790,325.00	.....	1,288,880.00
Shell Pet. Corp.:					
Houston	389,375.00	167,978.00	1,284,880.00	227,400.00	2,069,633.00
Norco	.....	.....	264,793.00	.....	264,793.00
Standard Oil (La.):					
Baton Rouge	172,504.52	.....	1,038,170.33	151,212.81	1,361,887.66
Sun P. L. Co.:					
Sabine Pass & Sun	1,225,450.00	.....	.....	.....	1,225,450.00
Texas Co.:					
Port Arthur	1,181,241.00	758,213.00	2,638,424.00	833,876.00	5,411,754.00
Miscellaneous	1,998,895.00	412,035.00	2,325,630.00	503,762.00	5,240,322.00
Grand total	13,734,838.09	1,632,611.74	14,721,539.05	2,353,369.67	32,443,349.55

PERSONAL

HAROLD HOOTS, of Los Angeles, Calif., studied in Oklahoma and Kansas Universities and took his Ph.D. at Stanford in 1925. He is now in charge of geological exploration for Union Oil Company and is author of government bulletins on the geology of parts of West Texas, Wyoming, and California, written when he was in charge of certain field investigations for the U. S. Geological Survey. His literary efforts also include such subjects as the origin of oil, gas resources, and oil supply in California. He joined the staff of Union Oil Company as geologist in 1928.

W. W. ZINGERY, Houston, Tex., announced the arrival of a seven-pound boy the past week.

JONES O'BRION, of O'Brion Brothers, Inc., and Rex Drilling Company, Shreveport, La., is vacationing in California.

LAFE TODD, general superintendent of the Union Oil Company's pipe line system, recently completed his thirtieth year of service with the company.

J. S. WARREN, general manager of the Maloney Tank Manufacturing Company, of Tulsa, and MRS. WARREN are on an automobile tour into the Rocky Mountain and Canadian oil areas. Mrs. Warren will stop at Manitou, Colo., while Mr. Warren visits the Denver division headquarters of the National Supply Company, which is distributor for Maloney tanks in the Rocky Mountain oil area, then on to Casper and Cody, Wyo., Kevin and Cut Bank, Mont., and Canada. The trip, which will be a combined vacation and business trip, will consume about three weeks.

O. T. BEADLE, an executive of Sinclair Refining Company in Brussels, Belgium, arrived in New York last week for a visit with friends and business associates.

ROY WESTBROOK, president of Westbrook Oil Corporation, Fort Worth, Tex., and MRS. PEGGY ELLISON, of that city, were married on August 8 and left immediately for a trip to Colorado.

C. C. IRELAND, Los Angeles, Calif., district sales manager, Union Oil Company, while on vacation recently in Portland, Ore., hied himself out to the Rose City Golf Club and made a hole in one.

H. D. EASTON, JR., consulting geologist and petroleum engineer, of Shreveport, La., is spending two weeks at Camp Bullis, Fort Sam Houston, San Antonio, Tex., where he is first lieutenant in the 336th Field Artillery.

F. W. HATCH, who for more than a year has been field representative for asphalt and fuel oil sales of the Shell Oil Company, has been appointed sales manager of the San Francisco, Calif., division succeeding R. D. STETSON, who has been appointed assistant to the general sales manager of the company with headquarters at San Francisco.

A. I. LEVORSEN, consulting geologist, Tulsa, has returned from a 10 weeks' vacation spent in Minnesota.

MISS ANN CURREN, of the Marathon Oil Company's land department, is visiting relatives in Mannington, W. Va.

GEORGE SCHWAB, head of the land department for Barnsdall Oil Company, was a Houston, Tex., visitor last week.

O. D. DONNELL of Findlay, Ohio, president of the Pure Oil Company, who has been on a business trip to Tulsa has returned home.

R. L. CLIFTON, assistant general superintendent of the Carter Oil Company, is spending a two weeks' vacation in Yellowstone Park, Wyoming.

H. E. WORMHOUDT of the Cushman-Wilson Oil Company has resigned as chairman of the public relations committee of the Iowa oil marketers.

PRINCE M. A. SOUMBATOFF has been appointed a director of the New Schibaieff Petroleum Company, London, England, to fill the vacancy caused by the death of HENRY NEVILLE BENJAMIN.

HAROLD DECKER, production superintendent, Skelly Oil Company, and P. R. (PAT) RUTHERFORD, Rutherford Drilling Company, Houston, Tex., have returned after spending their vacations in Colorado.

EDWARD H. CLAYTON, superintendent of the Drilling & Exploration Company, has been transferred to Midland, Tex., which is steadily advancing as a West Texas oil center. Other recent removals to that city are MARK D. JOHNSON of the Eastman Oil Well Survey Company, and REX SACKETT of the production department of the Sinclair Prairie Oil Company.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

Delevan Emery of Bradford, Pa., oil man dies of Brights disease. He was a son of Lewis Emery, Jr., and manager of the Emery Refining Co.

Isaac E. (Farmer) Dean, Pennsylvania oil producer and politician, dies at Oil City, La., at the home of his brother. He was noted as an advocate of free and unlimited coinage of silver at a ratio of 16 to 1.

20 YEARS AGO

Samuel McCrum, for 8 years in the oil well supply business, dies in Salamanca, N. Y., while on the way from Bradford to Erie, Pa. He was for a time secretary of the Tri-State Gas Co., Pittsburgh, Pa.

Charles F. Martin, of the International Refining Co. and Ardmore Refining Co. has resigned to join the Texas Company's refining division at Houston. He organized the Western Petroleum Refiners Association and was secretary of that body for some time.

Creek County, Oklahoma, produces more oil than any other county in the United States. The Glenn Pool and Cushing field are largerly responsible.

Corporation Commissioner Campbell Russell announces he will initiate a petition for an increase in Oklahoma's gross production tax to 4 per cent. It is now 3 per cent.

10 YEARS AGO

Crude oil production in the United States has been steadily increasing since April, and is now 2,185,369 bbls. per day.

The largest well yet drilled in the Sunburst, Mont., field starts off at 4,000 bbls. per day.

Gasoline retails in Tulsa at 23 cents per gallon including a 3-cent tax and at 23 cents per gallon, no tax, in New York.

DR. J. BRIAN EBY, consulting geologist at Houston, Tex., is on an extended vacation trip through the East.

ART O. OLSON, president, Olson Drilling Company, Tulsa, has returned from his vacation trip to Minnesota.

CHARLES B. COON, of the Sinclair Prairie Oil Company's land department, is visiting in Monterey, Mexico.

P. R. (BUD) DOUGLAS, formerly with the Waukesha Motor Company, is now connected with the C. F. Camp Company of Tulsa.

LEW HILTON, sales manager of Cameron Iron Works, stopped off in Tulsa on a field trip covering Kansas, Oklahoma and Texas points.

J. I. SMITH, draftsman for Piney Oil & Gas Company, Amarillo, Tex., has been transferred to the New York offices of Columbian Carbon Company.

A. J. H. CARNEGIE, geologist with Sinclair Prairie Oil Company, and MRS. CARNEGIE, are spending their vacation in the Canadian Rocky Mountain district.

HERBERT GUEDELLA has been appointed a director of W. B. Dick & Company, and of W. B. Dick & Company (Holding), Ltd., English corporations.

R. C. BAST, chief clerk, Parkersburg Rig & Reel Company, Dallas, Tex., office, is relieving C. C. BYERS of the Tulsa district office while Mr. Byers is on his vacation.

F. W. AKRIGHT has been transferred from Oklahoma City to Fittstown, Okla., by Phillips Petroleum Company. He is gaining experience on mud work and other drilling problems.

PARAGRAPHS

J. F. LINCOLN, president and general manager of the Lincoln Electric Company, Cleveland, Ohio, has just returned from a business trip to Germany, which he made to investigate a new type of machine for manufacturing oxygen.

C. W. HAMILTON, assistant to W. T. WALLACE, vice president of Venezuela Gulf Oil Company, and other South American subsidiaries of Gulf Oil Corporation, has returned to New York from an airplane trip to Venezuela.

H. R. GALLAGHER, president of Consolidated Oil Company; PATRICK J. HURLEY, special counsel, and R. W. RAGLAN arrived in Los Angeles, Calif., last week in connection with final preparations for filing the projected reorganization plan for Richfield Oil Company and Pan American Petroleum Company.

W. D. DARK of Oak Grove, La., has been appointed manager of the Monroe office of the minerals division of the Louisiana department of conservation to succeed the late CAPT. R. P. WEBB, recently deceased. Mr. Dark has been connected with the conservation department since 1929, the last four years having been spent in the enforcement division.

H. A. MILLER, J. P. HUGHES and L. B. McCAMMON, of the Ohio Oil Company, have returned from a business trip to Robinson, Ill., and Findlay, Ohio.

W. M. EMANUEL, independent oil operator and lease buyer, Ada, Okla., was a recent business visitor in Tulsa, and then went on to Los Angeles, Calif., on business.

M. A. ROBINSON, counsel for the Olson Drilling Company, Tulsa, and family have gone to Rochester, Minn., and other points in the north lakes country on vacation.

WILLIAM RIXOM has been named to succeed E. S. WALNE, resigned, as assistant drilling and production superintendent in Mexico for Cia. Mexicana de Petroleo "El Aguila" S.A., at Tampico. Mr. Walne has entered the independent ranks at Houston, Tex.

CHARLES R. BROWN, assistant to the president of the Associated Oil Company and manager of the industrial relations department, has been connected with the executive department at San Francisco, Calif., since entering the employ of the company in 1917. In February, 1929. Mr. Brown was appointed assistant to the president, and in February, 1932, was also made manager of the industrial relations department. He is a member of the company's executive staff and directs many of the general administrative functions of the company.

R. E. REYNOLDS, of London, England, has resigned from the board of Oil Wharves, Ltd.

E. S. PORTER, treasurer, Amerada Petroleum Corporation, Tulsa, is resting in Colorado for about two weeks.

JOE PASTARNAK, representative for Black, Sivalls & Bryson, Inc., has been transferred from Oklahoma City, Okla., to Gainesville, Tex.

CALVIN E. DUNCAN of San Francisco, Calif., visited Calgary, Alberta, recently, where he investigated the recent oil development.

C. D. WATSON, proration engineer, Carter Oil Company, Tulsa, will be in Minnesota with his family until about September 1 on vacation.

R. I. SEALE and M. G. DOMSETZ have been placed in charge of the new office of the Schlumberger Oil Well Surveying Corporation, Hutchinson, Kans.

JOHN R. MILLER, chief geologist, Southwestern Texas Division for the Texas Company at Houston, is spending his vacation at his home in Tennessee.

E. J. FORREST, who is employed by Phillips Petroleum Company at Fittstown, Okla., is on a two weeks' vacation in Texas. He will visit the Centennial at Dallas.

R. H. ABRAMS of Butler, Pa., in charge of operations for the Phillips Drilling Company, has been transferred to Midland, Tex., where the company has opened offices.

JACK NICHOLS, president, Sure Shot Oil Company, Amarillo, Tex., has returned from a vacation trip to California. His family remained for the rest of the summer.

G. RAYMOND, chief engineer, Oklahoma City, Okla., and A. J. EDWARDS, sales manager, Tulsa, with Black, Sivalls & Bryson, Inc., are attending the oil show at Mount Pleasant, Mich.

Grew in Oil Atmosphere

William M. Irish, president of the Atlantic Refining Company, grew up in an atmosphere of oil. He was born in 1868 in Fairhaven, Mass., but shortly afterward his father, sensing the importance of the expanding oil industry, moved to Titusville, Pa., where he became refinery superintendent for the Octave Oil Company, later the Acme Oil Company, a Standard Oil subsidiary. In 1879 the family moved to Olean, N. Y., where Mr. Irish built a refinery for the Acme. Here W. M., Jr., graduated from high school, after which he attended Cornell University, majoring in chemistry. Back from school, he had his first real refinery job in Olean, though as a boy he had done odd jobs about the refinery. A short time later the young man was sent to Lima, Ohio, to become assistant superintendent of the Solar Refining Company, of which J. W. Van Dyke was superintendent. This company was owned by the Standard, as was the Atlantic Refining Company when, in 1903, both men were transferred to the Atlantic's Point Breeze plant in Philadelphia, Mr. Van Dyke as manager and Mr. Irish as his assistant.

W. M. IRISH

Upon dissolution of the Standard Oil Company in 1911 Mr. Van Dyke became president of Atlantic and Mr. Irish secretary and plant manager, which title was changed to vice president in 1915. The two men have continued to be closely associated. The company expanded its operations and in 1927 Mr. Irish was made president. Mr. Van Dyke is chairman of the board of directors. Mr. Irish's son, W. M. III, is vice president of the Atlantic Petroleum Company, in Dallas, Tex.

J. E. HOLM, division manager, Atlantic Oil Producing Company, is spending his vacation in New York City.

G. W. RILEY, district superintendent for the M. B. K. Drilling Company, has been transferred from Tulsa to Odessa, Tex.

CLARE STOVER has returned to Chatham, Ontario, from Manitoulin Island, where he has been leasing acreage for a Toronto syndicate.

CHARLES R. KRAUSE, president, Lee C. Moore Company, Tulsa, is spending a month's vacation in California and when last heard from was in San Francisco.

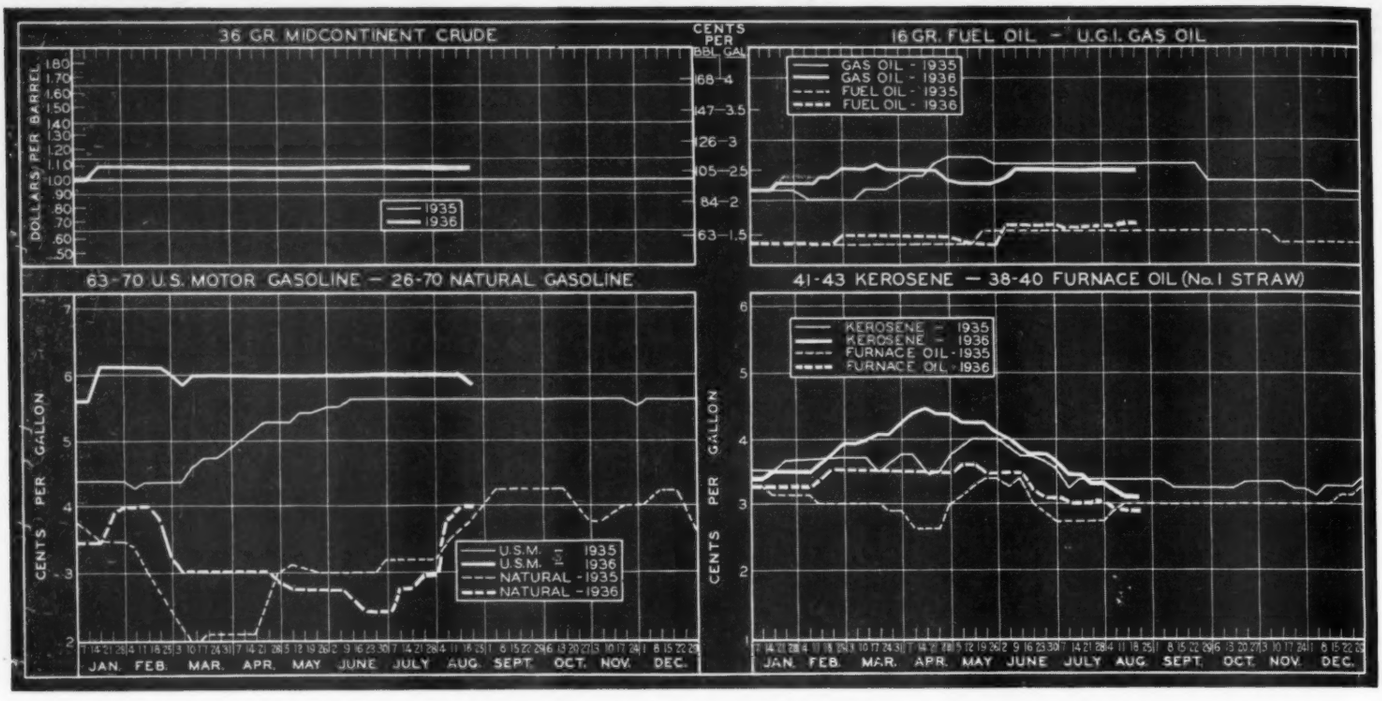
LLOYD HARBERT, secretary and treasurer of the Pacific Enterprise Products, Inc., is in Tulsa looking over the situation and expects to remain for several weeks.

J. H. GARDNER, president, Gardner Petroleum Company, Tulsa, and family, are in Texas visiting the Gulf Coast resorts and taking in the Centennial Exposition at Dallas, Tex.

K. E. (TED) COOK, sales promotion manager for Standard of New Jersey and Colonial Beacon, is vacationing with MRS. COOK in New England. He will return to duty August 31.

DR. R. A. SMITH, chief geologist of the Department of Conservation for the state of Michigan, is away from his office in Lansing enjoying a vacation but expects to return before the end of the month.

A. A. STEFFY, production foreman for Phillips Petroleum Company in the Fitts field, is on a vacation with his family. They will visit at the home of FRANK BERRY, Mr. Steffy's brother-in-law, who is in charge of production for Phillips Petroleum Company at Breckenridge, Tex.


36 GR. MIDCONTINENT CRUDE
DOLLARS PER BARREL
CENTS PER BBL GAL
1935
1936
16 GR. FUEL OIL — U.G.I. GAS OIL
GAS OIL - 1935
GAS OIL - 1936
FUEL OIL - 1935
FUEL OIL - 1936
63-70 U.S. MOTOR GASOLINE — 26-70 NATURAL GASOLINE
CENTS PER GALLON
U.S.M. #1 1935
U.S.M. #1 1936
NATURAL - 1935
NATURAL - 1936
41-43 KEROSENE — 38-40 FURNACE OIL (No.1 STRAW)
KEROSENE - 1935
KEROSENE - 1936
FURNACE OIL - 1935
FURNACE OIL - 1936
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

Representative Mid-Continent Quotations on Crude Oil and Refined Products. Basis Oklahoma (Group 3)

Furnace Oils Subject of Increasing Interest in Group 3 Market Area

By T. F. SMILEY

Petroleum products which ordinarily are the center of interest were doing so little to turn eyes in their direction this week that the light distillates, usually occupying an inconspicuous place, found themselves the subject of unaccustomed attention in the Group 3 territory. There were predictions several months ago that stocking up on furnace oils would begin early this year because of the acute shortage into which refiners and jobbers ran last spring. But memories are short, and sometimes it takes more than one harsh experience to teach a lesson. Besides that, no man frying in this summer's sizzling heat is likely to feel like buying anything that will make a fire.

NO LARGE BUYING FOR STORAGE

Anyway, the end of August is at hand, and so far as can be ascertained there has been relatively little buying of furnace oils for storage. Inquiries have been brisk in the last two weeks or so, but most of them have yet to be converted into orders. One of the queer things about the situation is that some of the furnace oils are closely held. The No. 2 straw is especially tight. Most of the inquiries name this material, but the inquiries seem to be coming for the most part from bargain hunters. Refiners seem to believe that there will be something resembling a buying wave in a few weeks, with a stiffening of quotations, and that they would be foolish to let their material go at the present price levels. Prime white, which has been the weakest member of the furnace oil group, was showing a little better tone.

In connection with the apparent dilatoriness in storing heating oils for the coming fall and winter it is pointed out that, according to American Petroleum Institute figures, total stocks of gas oil and fuel oil in the United States east of California are almost 8,000,000 bbls. less than they were at this time last year.

Gasoline consumption continues at a record-breaking rate, available information indicates, and the country's total stocks are dropping in a gratifying manner; but notwithstanding these favorable conditions the motor fuel market lacked sturdiness this week. Although there seemed to be no distress stocks, material was being sold at prices below those supposed to be ruling. It was difficult to place one's finger on the precise cause for uneasiness, but there was a disposition to attribute it to the widespread drouth and to lingering misgivings concerning excess stocks which still must be disposed of in the coastal areas in order that the market may enter the winter season in a healthy condition.

NATURALS HOLDING UP WELL

Natural gasoline was holding up well, with no indications of exhaustion after its perpendicular rise chartwise since the first of August. Major refiners were reported to be taking large shipments for building their winter-specification motor fuel. Prices, which had been rocketing, took a rest, but the market was firm at prevailing quotations. Prices have not yet reached the level attained in August last year, and regardless of any easiness which may develop in the U. S. Motor market, there is a feeling in the trade that the naturals are likely to equal last year's record at least, especially in view of the curtailed supply coming out of the Texas Panhandle. Contract buyers, who were said to have been delaying shipments on their contracts because of rapidly rising prices, were reported to be taking material during the last week, effecting a better-balanced market.

Kerosene and the tractor fuels were lifeless. The dull market in these products is ascribed directly to the drouth, which has cut down plowing, harvesting and other agricultural operations. There was a continuance of the good demand for heavy fuels, with railroads reported heavy buyers.

Gas oil continued tight. Supplies were scarce and there was no disposition to shade prices. Bright stocks and neutrals were lacking spirit, and although prices in the East had been raised, little talk of similar action in the Mid-Continent was heard. Wax was dull.

Refined Oil Market Barometer

Drouth conditions are having an adverse effect on kerosene and tractor fuels and to a less noticeable degree on gasoline. The tankcar gasoline market shows lack of vigor in some areas, although consumption generally continues high. Some observers express the view that burning oils will develop marked strength and hold it until the needs of next spring are clearly determined.

MID-CONTINENT. Tankcar gasoline less spirited. Furnace oils gathering strength.

EAST COAST. Bunker C fuel oil advanced. Retail gasoline market irregular.

GULF COAST. Gasoline and kerosene steady.

PENNSYLVANIA. Kerosene weak. Gasoline spotty.

CALIFORNIA. Gas oil and diesel softer.

CHICAGO. Gasoline prices less firm. Kerosene and tractor fuels soft.

Bunker C Fuel Oil Advanced in East; Gasoline Demand Continues Rise

By H. STANLEY NORMAN

NEW YORK, Aug. 17.—Bunker C fuel oil, probably the outstanding strong link in the refined products market this summer and the one undergoing the least fluctuation, responded to strong demand early this week and was advanced 5 cents per bbl. at most ports north of Charleston, S. C.

The advance was headed by Standard Oil Co. of New Jersey and applied to New York, Boston, Baltimore, Norfolk and Charleston, S. C. The new price is $1.10 per bbl., excepting at Charleston where the advance raised the quotation only to $1.05.

Rumors had been current for three weeks that the heavier fuel oils were in position for higher prices, but the suppliers seemed reluctant to take the leadership in advancing the schedule. With the ice broken by Standard of New Jersey, it was apparent that other suppliers will in most instances take advantage of the opportunity to reach higher ground.

Although the service station gasoline price in New York and adjacent territory is far from satisfactory, refiners have succeeded generally in maintaining the tankcar market at previous levels. Depressed retail markets also exist in New England states and in parts of New Jersey and Pennsylvania. There is strong indication that the backbone of the price war in New York has been broken with signs offering 8 gallons of gasoline for 98 cents, including taxes, practically extinct. Numerous offers of 6 gallons of house-brand gasoline for 98 cents, including 4 cents state and federal taxes, persist along the main highway arteries, but station operators working for the most part under a modification of the "Iowa plan" were more than ready to abandon this method of bidding for business.

Revival of export business in all classes of wax and resumption of crude oil shipments from the Gulf Coast's open market to foreign refiners gave further strength to the entire petroleum list at the end of last week.

Refiners for the most part are maintaining their tankcar gasoline prices at unchanged levels, although a little business was transacted during the middle of last week at 6¾ cents for 65 octane grade motor fuel in Atlantic Coast ports. Those in position to supply any material quantity of gasoline, however, are clinging to 7 cents per gallon quotations and the volume of business at the fractionally lower price was hardly representative of the market.

FUEL OILS

Light fuel oils are unsettled and present a marked contrast to the heavier material. Reduction of kerosene cuts at numerous refineries in favor of more liberal production of distillates has tended to weaken the market for the latter products without injecting a stimulant to the former. Contraction of kerosene requirements in the agricultural belt where drouth conditions have seriously retarded tractor operations is blamed for weakness in this market.

A few transactions at 3.875 cents per gallon for Nos. 2 and 3 fuel oils in the New York harbor area were reported closed last week. However, only one lot of size was moved at the fractionally lower prices and it involved kerosene, No. 2 and No. 4 oils. Remainder of the trading at lesser prices was confined to small quantities and was lightly regarded by a majority of marketers. Several of the suppliers register complete disinterest in business at the present bids for light fuel oils and in many instances have withdrawn completely from the market. Those in position to do so are thoroughly content to store their light fuels and express confidence that prices will be bolstered materially within a few weeks when deliveries on contract open in the early fall. The heavier fuels are in a much stronger position than other burning material.

Continued heavy demand for gasoline with greater inroads on stocks are factors responsible for keeping tankcar prices fairly well sustained. Despite appearance of scattered sales at a quarter of a cent per gallon less than the general quotation a big majority of dealers expected the sag to disappear when the responsible cargo is passed into service station tanks. The 6¾ cents per gallon material was reported supplied by a Gulf Coast refiner who has been inclined to undersell the market on the slightest sign of stiff pressure. That no important under priced material is available at Gulf Coast or Atlantic ports is evidenced by the fact none of the refiners in those two localities are making a serious bid for export business obtainable only at concession quotations. Lubricating oils made no progress whatever last week, but there was no further evidence of lowering prices. Only small lots of lubricants figure in the export trade at the present but most exporters anticipate improvement in conditions later in the year.

One of the factors contributing to increases in gasoline consumption and one that will be at least constant on a year-round basis is the motorization of public transportation systems. In an analysis released this week, motorization of one main transportation artery in Manhattan is calculated to require 5,000,000 gallons of gasoline annually. Trolleys throughout the country are gradually giving way to the more efficient and more economical bus systems. Gasoline consumption in the New York territory probably will continue to increase for a period of years through motorization of street transportation systems alone. Brooklyn, where surface railway traffic exceeds that of all the other metropolitan New York boroughs combined, probably will be among the next territories converted from trolleys to buses. During 1935, surface lines in Brooklyn carried 337,636,740 passengers, more than half as many using street public transportation systems in the entire city of New York. A comparatively short bus line, the Fifth Avenue Coach Co., consumes approximately 2,000,000 gallons of gasoline a year. There are now approximately 750 buses operating in Manhattan consuming about a gallon of gasoline for every 3 to 5 miles. The buses are traveling on 14 routes.

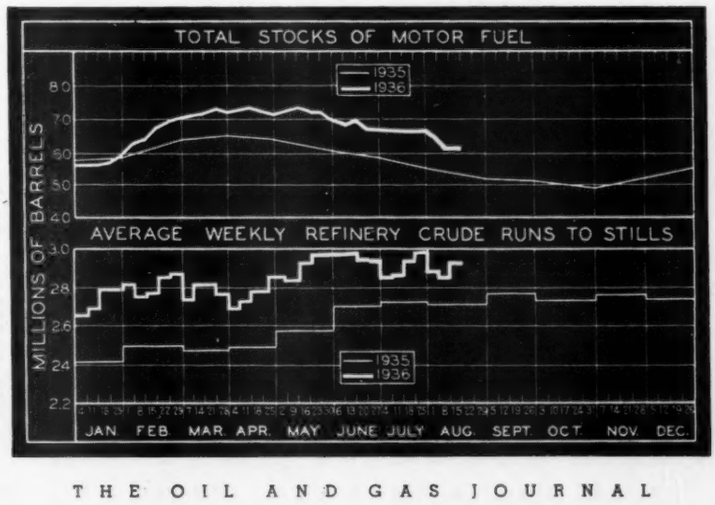
Expectations that gasoline consumption will continue above last year's levels are now firmly established and the fear that the last half of 1936 would more nearly equal demand for the last six months of 1935 than prevailed from January through June is virtually dispelled. The anticipated gasoline demand increase is partially based on factory sales of new cars which continued through July at the highest rate for the month on record, excepting 1928. The new car sales, reported by the Automobile Manufacturers Association last week, show July car sales to be 33 per cent above the distribution for the same month in 1935. This record is considered particularly bright for both the car manufacturers and oil companies in view of the fact that purchasers are naturally reluctant to buy new automobiles with 1937 models only a few weeks removed from markets. Sales resistance is at its highest point of the year in the automobile field but purchases are continuing at near record breaking levels.

A. P. I. Weekly Refinery Statistics

Week Ending August 15, 1936

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	488,000	17,392,000	11,676,000
Applachian	94.8	99,000	2,219,000	587,000
Indiana, Illinois, Kentucky	96.1	411,000	8,953,000	5,459,000
Oklahoma, Kansas, Missouri	84.8	296,000	5,673,000	3,542,000
Inland Texas	48.5	120,000	1,363,000	1,660,000
Texas Gulf	96.8	589,000	6,863,000	8,532,000
Louisiana Gulf	96.4	129,000	1,759,000	2,397,000
North Louisiana and Arkansas	90.0	41,000	268,000	425,000
Rocky Mountain	61.9	49,000	968,000	801,000
California	92.6	504,000	12,027,000	73,465,000
Total reports	89.7	2,726,000	57,485,000	108,544,000
Estimated unreported		199,000	4,468,000	2,251,000
*Estimated total		2,925,000	61,953,000	110,795,000
*Estimated total previous week		2,870,000	62,020,000	109,771,000
†August 31, 1935		2,728,000	51,700,000	109,282,000

*Bureau of Mines basis, currently estimated. †Monthly report, U. S. Bureau of Mines.



RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of August 18, 1936

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank-wagon or 3 cents a gallon off retail prices is permitted for purchases between 4,000 and 10,000 gallons per month, or 4 cents a gallon off retail prices for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Standard Oil Co. (Indiana)

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Chicago	15.5	17.5	4.0	10.1
Decatur, Ill.	16.0	18.0	4.0	10.1
E. St. Louis	15.7	17.7	4.0	9.8
Joliet	14.5	17.5	4.0	10.1
Peoria	16.0	18.0	4.0	10.1
Quincy	15.8	17.8	4.0	9.9
Davenport, Ia.	16.0	(†)	4.0	10.1
Des Moines	15.8	(†)	4.0	9.9
Mason City	16.2	(†)	4.0	10.3
Sioux City	16.0	(†)	4.0	10.1
Duluth, Minn.	16.8	18.8	4.0	10.9
Mankato	16.4	18.4	4.0	10.5
Minneapolis	16.4	18.4	4.0	10.5
LaCrosse, Wis.	17.4	19.4	5.0	10.6
Green Bay	17.7	19.7	5.0	10.8
Milwaukee	16.3	18.3	5.0	10.4
Madison	17.4	19.4	5.0	10.5
Detroit, Mich.	15.0	17.0	4.0	8.8
Grand Rapids	15.4	17.4	4.0	9.3
Saginaw	15.6	17.6	4.0	10.1
Evansville, Ind.	17.7	19.7	5.0	10.6
Indianapolis	17.9	19.9	5.0	10.8
South Bend	18.1	20.1	5.0	11.0
Fargo, N. Dak.	17.4	19.4	4.0	11.5
Huron, S. Dak.	17.9	19 9	5.0	11.0
Sioux Falls	17.4	19.4	5.0	10.5
Kans. City, Mo.*	15.4	17.4	4.0	8.0
Springfield	15.1	17.1	4.0	9.2
St. Louis	15.7	17.7	4.0	9.8
St. Joseph*	15.4	17.4	4.0	9.5
Wichita, Kans.	14.9	16.9	4.0	8.0
Bartlesville, Ok.	15.0	19.0	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent federal tax.

†Standard Oil Co. (Indiana) has leased all service stations in Iowa.

Discounts to dealers except in Iowa: 2½ cents on premium and regular and 2½ cents on third grade off service station prices; discounts to dealers in metropolitan Chicago one-half cent larger than rest of Standard of Indiana territory, namely 4 cents and 3 cents on respective grades. Dealers in Iowa sold at posted "Dealer Prices."

Stanolex Fuel Oil in Chicago

Effective August 1, 1936, f.o.b. Chicago tank-wagon prices: Range oil, less than 100 gallons, 8.75 cents; 100-149 gallons 7.75 cents; 150 gallons and more, 7.25 cents. No. 1, less than 150 gallons, 7.5 cents; 150 gallons or more, 6.5 cents. Stanolex furnace oil, less than 150 gallons, 7.5 cents; 150 gallons or more, 6.5 cents. Stanolex fuel "A," less than 400 gallons, 5.75 cents; 400 gallons or more, 4.75 cents. Stanolex fuel "B," 5.25 cents per gallon gross; 800 gallons or more 4.25 cents.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Atlanta, Ga.	20.5	22.5	7.0	*13.0
Augusta	20.0	22.0	7.0	*13 0
Macon	20.0	22.0	7.0	*13.0
Savannah	18.5	20.5	7.0	*13.0
Birm'ham, Ala.	21.0	23.0	8.0	12.0
Mobile	21.0	23.0	9.0	10.0
Montgomery	22.0	24.0	9.0	14.5
Jackson, Miss.	20.0	22.0	7.0	*13.0
Vicksburg	19.5	21.5	7 0	*13.0
Jacksonville, Fla.	18.0	20.0	8.0	10.0
Miami	19.5	21.5	8.0	12 5
Pensacola	21.5	23.5	9.0	12.0
Tampa	18.0	20 0	8.0	12.5
Lexington, Ky.	19.0	21.0	6.0	11.0
Covington	18.5	20.5	6.0	10.5
Louisville	19.0	21.0	6.0	10.0
Paducah	18.0	19.0	6.0	7.0

*Includes 1 cent state tax. Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon. Pensacola, Fla., has a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Denver, Colo.	19.0	21.0	5.0	11.0
Pueblo	19.0	21.0	5.0	10.0
Grand Junction	21.5	23.5	5.0	16.0
Casper, Wyo.	19.5	21.5	5.0	11.5
Cheyenne	19.5	21.5	5.0	13.0
Butte, Mont.	21.0	23.0	6.0	14.5
Billings	22.5	24.5	6.0	14.5
Helena	22.5	24.5	6.0	14.5
Great Falls	22.5	24.5	6.0	14.5
Salt Lake, Utah	21.0	23.0	5.0	16.0
Twin Falls, Ida.	23.0	25.0	6.0	18.0
Boise	22.5	24.5	6.0	18.0
Albu'que, N. M.	18.5	20.5	*6.5	13.0

*Includes one-half cent city tax.

Discount to dealers with or without contract in Continental territory: Undivided dealer discount off service station price, 4 cents except in Montana where a discount of 2 cents off tank-wagon price only is allowed; divided dealer accounts, 3½ cents.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
San Francisco	17.0	18.0	4.0	11.5
Los Angeles	16.5	17.5	4.0	9.0
Fresno, Calif.	17.5	18.5	4.0	11.0
Phoenix, Ariz.	21.0	22.0	6 0	‡16.0
Reno, Nev.	19 5	20.5	5.0	13.0
Portland, Ore.	19.5	20.5	6.0	13.5
Seattle, Wash.	19.5	20.5	6.0	13.5
Tacoma	19.5	20.5	6.0	13.5
Spokane	22.5	23.5	6.0	16.5

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank-wagon lots except in Phoenix where discount is 1 cent.

‡Includes 5-cent state tax.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Atl'tic City, N.J.	13.5	....	4.0	9.0
Newark	13.0	....	4.0	7.5
Annapolis, Md.	15.6	....	5.0	10.0
Baltimore	14.5	....	5.0	8.0
Cumberland	16.6	....	5.0	12.7
Wash'g'n, D. C.	12.5	16.0	3.0	9.0
Danville, Va.	17.5	21 0	6.0	12.9
Norfolk	16 0	19.5	6.0	11.3
Petersburg	16.5	20.0	6.0	11.7
Richmond	16.5	20.0	6.0	11.7
Roanoke	17.5	21.0	6.0	12 9
Charles'n, W. Va.	15.8	19.3	5.0	12.6
Parkersburg	15.1	18.6	5.0	11.2
Wheeling	15.0	18.5	5.0	12.2
Charlotte, N. C.	18.4	21.9	7.0	12.6
Hickory	18.9	22.4	7.0	13.0
Mt. Airy	18.7	22.2	7.0	12.8
Raleigh	18.5	....	7.0	12.1
Salisbury	18.5	....	7.0	12.7
Charleston, S.C.	17.0	20.5	7.0	11.3
Columbia	18.3	21.8	7.0	12.6
Spartanburg	18.7	22.2	7.0	12.9

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount (if necessary) is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Omaha	18 4	20.4	6.0	10.4
McCook	19.1	21 1	6.0	11.1
Norfolk	18.8	20.8	6.0	10.8
North Platte	19.2	21.2	6.0	11.2
Scottsbluff	19.9	21.9	6 0	11.9

Note—Discounts to dealers: where service station gasoline prices are (maximum overall, including rent) as follows: Reliance, 2½ cents; Standard Red Crown, 3½ cents; Red Crown Ethyl, 3½ cents.

Where service station gasoline prices are below normal resellers' allowances are reduced one-half of the amount below normal, down to the following (minimum overall, including rent): Reliance, 2 cents; Standard Red Crown, 3 cents; Red Crown Ethyl, 3 cents. Discounts to consumers for tank-wagon deliveries covered only by standard commercial consumers contract effective January 1, 1935.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.*

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Philadelphia, Pa.	16.5	17 5	5.0	9.5
Pittsburgh	17.5	19.5	5.0	9.0
Allentown	17.0	18.0	5.0	9.5
Erie	17.5	18.5	5 0	8.0
Scranton	16.75	17.0	5.0	10.0
Altoona	17.5	19.5	5.0	9.5
Dover, Del.	17.0	17.0	5.0	10.0
Wilmington	17.0	17.0	5.0	9.0
Springf'ld, Mass.	13.0	16.5	4.0	7.5
Worcester	14.0	17.5	4.0	7.75
Hartford, Conn.	13.0	16.5	4.0	7.0
New Haven	13.0	16.5	4.0	7.5
Providence, R. I.	12.0	15.5	3.0	7.0

Note—Tank-wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
N. Orleans, La.	18.5	22.0	*9.0	12.0
Baton Rouge	18.0	21.5	8.0	11.5
Alexandria	18.5	....	8.0	11.0
Lafayette	19.0	....	8.0	12.5
Lake Charles	19.0	....	8.0	11.0
Shreveport	17.5	21.0	8.0	10.0
Knoxville, Tenn.	20.5	24.0	8.0	14.0
Memphis	19.0	22.5	8.0	11.0
Chattanooga	20.5	24.0	8.0	11.5
Nashville	20.0	23.5	8.0	10.0
Bristol	18.75	21.5	8 0	14.5

*Includes 1-cent parish tax.

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at dealer price less one-half cent.

Louisiana kerosene prices include 1-cent state tax.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline: Post deal	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Albany, N. Y.	13.0	16.5	4.0	7.75
*Met. N. Y.				
Manhtn., Bronx	12.7	....	4.0	7.25
Staten Island	13.0	18.0	4.0	7.25
Qu'ns & Br'klyn	12.7	....	4.0	7.25
Buffalo	13.5	17.0	4.0	8.25
Rochester	13.5	17.0	4.0	8.25
Syracuse	13.5	17.0	4.0	8.75
Boston, Mass.	13.0	16.5	4.0	7.50
Portland, Me.	14.5	....	5.0	7.75
Manch'ter, N. H.	15.0	....	5.0	8.00
Burlington, Vt.	16.5	....	5.0	8.75

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Southwestern District

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Dallas, Tex.	15.0	17.0	5.0	7.5
Fort Worth	15.0	17.0	5.0	8.5
Houston	16.0	18.0	5.0	8.5
San Antonio	16.0	18*0	5.0	8.5
El Paso	17.0	19.0	5.0	10.0
Muskogee, Ok.	17.0	19.0	5.0	8.0
Okla. City	17.0	19.0	5.0	8.0
Tulsa	17.0	19.0	5.0	8.0
Ft. Smith, Ark.	17.0	19.0	5.0	8.0
Little Rock	19.5	21.5	7.5	9.5
Texarkana	16.5	18.5	5.0	8.5

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gallon lots if covered by contract.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Ohio points	17.5	19.5	5.0	*13.5

*Includes state tax of 1 cent.

Canada*

Imperial 3-Star Gasoline

IMPERIAL OIL, LTD.

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Hamilton, Ont.	21.0	23.5	6.0	17.6
Toronto, Ont.	21.0	23.5	6.0	17.6
Brandon, Man.	29.8	32.8	7.0	22.8
Winnipeg, Man.	28.2	31.2	7.0	20.7
Regina, Sask.	29.5	32.5	7.0	22.0
Saskatoon, Sask.	32.3	35.3	7.0	24.8
Edmonton, Alta.	31.7	34.7	7.0	24.3
Calgary, Alta.	29.0	32.0	7.0	21.8
Vancouver, B. C.	25.0	28.0	7 0	23.0
Montreal, Que.	19.5	22.0	6.0	17.4
St. John, N. B.	25.0	29.0	8.0	19.4
Halifax, N. S.	25.0	29.0	8.0	19.4

*Imperial gallon used in Canada.

Discount to dealers: Divided dealers pay 3 cents per gallon below station price, undivided dealers pay 4 cents per gallon below station price except in cities of Hamilton, Toronto and Montreal where discounts below station price are one-half cent per gallon less and in Vancouver where discounts are 1 cent per gallon more.

Retail Price Changes

Atlantic Refining Co. July 25 reduced tank-wagon and station gasoline 1 cent in Springfield; July 17 advanced tank-wagon and station gasoline .5 cent in Hartford and New Haven.

Rocky Mountain Runs

Following is the estimated daily average production of the Rocky Mountain fields for the week ending August 15:

	Bbls.
WYOMING	
Salt Creek	16,410
Big Muddy	1,480
Badger Basin	40
Black Mountain	130
Byron	680
Dallas Derby	710
Dutton Creek	60
Elk Basin	460
Ferris	10
Frannie	1,790
Garland	370
Grass Creek	1,360
Hamilton dome	1,150
Hidden dome	90
Hudson	320
LaBarge	1,060
Lance Creek	4,210
Lost Soldier	1,040
Midway	40
Oregon Basin	2,710
Osage	790
Quealy dome	120
Rock River	1,590
South Casper	580
Poison Spider	190
Simpson Ridge	70
Teapot	30
Total Wyoming	37,490
MONTANA	
Buckley Border	180
Cat Creek	690
Cut Bank	10,140
Dry Creek	50
Kevin	4,440
Lake Basin	40
Pondera	1,020
Total Montana	16,560
COLORADO	
Florence	220
Fort Collins	310
Iles	3,740
Moffat	410
Orchard	60
Rangely	80
Tow Creek	160
Total Colorado	4,980
NEW MEXICO	
Artesia	640
Cooper	7,420
Eunice	20,640
Hobbs	22,910
Hogbank	300
Jal	3,180
Lea	1,020
Maljamar	2,330
Monument	12,350
Rattlesnake	540
Table Mesa	100
Total New Mexico	71,740
Total Rocky Mountains	130,770

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of August 18, 1936

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 octane and below (3d gr.)	.04⅝	.05
63-67 octane	.05⅛	.05⅝
68-70 octane (regular)	.05⅞	.06
60-62 400 grades:		
62 octane and below	.04⅜	.05
63-67 octane	.05⅛	.05⅝
68-70 octane (regular)	.05⅞	.06
64-66 375	.04⅞	.05½
68-70 360	.05	.05½

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.04⅜	.05
63-67 octane	.05⅛	.05⅝
68-70 octane (regular)	.05⅞	.06
60-62 400	.04⅜	.05
64-66 375	.05	.05½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:		
62 octane and below	.05½	.05⅝
63-67 octane	.06¼	.06½
68-70 octane (regular)	.06½	.06⅝
60-62 400	.05⅝	.06

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:		
62 octane and below	.05½	.05⅝
63-67 octane	.06¼	.06½
68-70 octane (regular)	.06½	.06⅝

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.04⅞	.05
63-67 octane	.05⅝	.05½
68-70 octane (regular)	.06	.06⅛
60-62 400 grades:		
62 octane and below	.04⅞	.05
63-67 octane	.05⅝	.05½
68-70 octane (regular)	.06	.06⅛
64-66 375	.04⅞	.05
68-70 360	.05	.05⅛

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:		
Below 60 octane		.05⅞
60-64.9 octane		.07
65-70 octane		.07¼
64-66 375		.06⅛
68-70 350		.06⅝

CALIFORNIA (domestic movement)

54-58 U. S. Motor	.07	.08
58-60 400	.07¾	.08½

EAST COAST (domestic)—

U. S. Motor below 60 octane:	
*New York (Bayonne)	.06½
Baltimore	.06½
U. S. Motor, 60-64.9 octane:	
*New York (Bayonne)	.06⅝
Philadelphia	.06⅝
Boston	.06⅝
Baltimore	.06⅝
Charleston, S. C.	.06⅝
U. S. Motor, 65 and above:	
*New York (Bayonne)	.07
Philadelphia	.07
Boston	.07
Baltimore	.07
Charleston, S. C.	.07

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.05⅝	.05⅞
60-64.9 octane		.06
65 octane and higher	.06¼	.06¼

Naphtha

PENNSYLVANIA (inland refineries)

50-52 450 (blending)	.05⅝
52-54 450 (blending)	.05⅝
54-56 450 (blending)	.05⅞

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.04
Grade 18-55	.04⅜	.04⅞
Low vapor pressure grade:		
*14-pound v.p. (max.)	.05⅜	.05½
*12-pound v.p. (max.)	.05⅝	.06

*Nominal.

NORTH TEXAS—

Grade 26-70		.03⅜
Grade 18-55		.04½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70		.04⅜

CALIFORNIA—

75-85 375-390	.07	.07⅜

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110 flash, 540-550 e.p.	.03¼	.03½
41-43 gr., 300-350 i.b.p., 110-125, flash, 500-520 e.p.	.03½	.04¼
46-48 gr., 210-230 i.b.p., 480 max., e.p.	.04⅝	.05

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.03¼	.03¼
42-44	.03⅜	.03⅝

NORTH TEXAS—

41-43	.03¼	.03½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43	.03¾	.03⅞

ARKANSAS (Ark., N. La., Miss. del.)—

41-43	.04⅜	.04⅝

PENNSYLVANIA (inland refineries)—

45	.04½	.04⅝
46	.04⅝	.04⅝
47	.04⅜	.04⅞

CHICAGO (Based on Group 3)—

41-43	.03⅛	.03¼
42-44	.03½	.03⅝

CALIFORNIA (Pac. Coast market)—

38-40 high burning test	.03½	.05

NEW YORK (Bayonne, N. J.)—

41-43	.04⅝	.04⅞

GULF COAST (domestic)—

41-43		.03⅞

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.03	.03½
No. 1 straw, 38-40	.02⅞	.03⅛
No. 2 straw, 32-36	.02⅝	.02⅞
No. 2 dark, 32-36	.02⅝	.02⅞
No. 3, 28-32	.02½	.02⅝
No. 3, 15 and above, 28-32	.02⅜	.02½

NORTH TEXAS—

No. 1 prime white, 38-42	.03	.03¼
No. 1 straw, 38-40	.02⅞	.03⅛

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.02⅝	.03

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36	.03	.03¼
No. 3, 28-32	.02⅞	

CHICAGO (Based on Group 3)—

No. 1 prime white, 38-42	.03	.03⅛
No. 1 straw, 38-40	.02⅞	.03
No. 2 straw, 32-36	.02⅝	.02⅞
No. 2 dark, 32-36	.02⅝	.02⅞
No. 3 zero to 15, 28-32	.02⅝	.02⅜
No. 3, 15 and above, 28-32	.02⅜	.02½

NEW YORK (Bayonne, N. J.)—

*No. 1	.04½	.04⅞
*No. 2	.04	.04¼
*No. 4	.03½	.03⅝

*Barge deliveries one-eighth to one-fourth cent under above, tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02½	.02⅝
No. 4, 24-28, low cold test	.95	1.05
No. 4, 15 and above, 24-28	.80	.85
No. 5, low cold test	.72½	.80
Below 18 fuel oil, industrial	.70	.75

NORTH TEXAS—

U.G.I. gas oil	.02⅝	.02½
No. 4, 24-28, low cold test	.95	1.00
No. 5, low cold test	.77½	.80
Below 18 fuel oil, industrial	.65	.75

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U.G.I. gas oil	.02⅝	.02⅝
10-14 fuel oil, industrial	.70	.75

ARKANSAS (Ark., N. La., Miss. del.)—

10-14 fuel oil, industrial	.60	.65

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02⅝	.02⅛
No. 4, 24-28	.95	1.00
No. 4, 15 and above, 24-28	.77½	.82½
No. 5, 18-22	.72½	.75
No. 6, 10-16	.62½	.67½

PENNSYLVANIA (inland refineries)—

36-40	.04⅛	.04¼

CALIFORNIA—

Los Angeles:		
30-34 gas oil, per bbl.	1.00	1.15
24 plus diesel	1.00	1.25
24 plus diesel (bunkers)	1.10	1.30
12-16 (bunkers at tidewater)	.85	.95
10-16 (cargo lots)	.75	.95
12-17 (tankcars)	.70	.95
San Joaquin Valley:		
10-18 (tankcars)	.65	.75
San Francisco:		
24 plus diesel, per bbl.		1.35
24 plus diesel (bunkers)		1.35
10-16 (bunkers)		1.00

GULF COAST—

28-30 gas oil	.03¼	.03⅝
28-30 diesel (bunkers)		1.50
Bunkers (bulk cargoes)		.85
Bunker C (bunkers)		.90

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.04¼
28-30 diesel (lighterage 6¾ per bbl.)		1.64
28-30 diesel (tankcars)	.04¼	.04½
*Bunker C (to ocean-going ships in N. Y. harbor)		1.10
Industrial fuel (tankcars)		.03¾

*Lighterage charge 5c bbl. additional.

Bright and Steam-Refined

OKLAHOMA (Group 3)—

Bright Stocks:	
190-200 D, 15-25	.21½
150-160 D, 0-10	.18½
150-160 D, 15-25	.18
150-160 E, 15-25	.17½
100-110 D, 0-10	.17
Steam refined:	
631 green (treated)	.14
600 dark green (untreated)	.05½

PENNSYLVANIA—

Bright Stocks (Pennsylvania grade No. 8 color, 145-50 at 510; 540-550 flash):

10 pour test	.24½ .25
15 pour test	.23½ .24
20 pour test	.22½ .23
25 pour test	.21½ .22
Steam refined:	
600	.13½ .14
650	.14½ .15
600 Pennsylvania flash	.15½ .16
630 flash	.17½ .18
600 Warren E filtered	.15½ .16

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:		
150-3		.10
180-3		.11¼
180-4		.10⅝
200-3		.11⅝
200-4		.11¼
250-3		.13⅝
250-4		.13¼
280-3		.14⅝
280-4		.14¼
300-3½		.15¼
400-3½		.16
100-2 paraffin oil		.05⅝
15-20 Cold Test:		
200-3		.10⅝
200-4		.10¼
240-3		.12⅝
240-4		.12¼
280-3		.13⅝
280-4		.12⅝

GULF COAST—

Pale Oils:		
200-3	.06½	.07
300-3	.07	.07½
500-3½	.08	.08½
750-3½	.08½	.09
1,200-3½	.09	.09⅜
2,000-4	.09¼	.09½
Red Oils:		
200-5-6	.06½	.06⅝
300-5-6	.06⅝	.07
500-5-6	.07½	.08
750	.08	.08½
1,200-5-6	.08½	.09

CALIFORNIA (moving to dom. market)

Pale Oils:		
100-2½-3		.06
200-2½-3		.06¼
300-3-3½		.06½
400-3-4	.08½	.09¼
450-3-4	.09⅜	.10
550-3-4	.10	.10¼
600-3-4	.10¼	.10½
Red Oils:		
200-4-5		.06
300-5-6		.06¼
350-5-6	.07	.08
400-5-6	.08	.08¼
450-5-6	.08¼	.08½
500-5-6	.08½	.09
600-5-6½	.09	.09½
700-6½ plus	.09⅝	.10
750-6½ plus	.10	.10¼
900-6½ plus	.10¼	.10½

PENNSYLVANIA—

150 vis. at 750° F., color, 400-405 flash:		
Zero pour test	19½	.20
10 pour test	.18½	.19
15 pour test	.18	.18½
25 pour test	.17	.17½
180 vis. at 70° F., 3 color:		
25 pour test	.19½	.20
200 vis. at 70° F., 3 color:		
Zero pour test	.23	.23½
10 pour test	.22	.22½
15 pour test	.21½	.22
25 pour test	.20½	.21

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.02¼	.02⅝

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c scale	.0235	.0240
124-126 (a.m.p.) w.c. scale	.0240	.0245

NEW YORK—

Wax in bags fully refined:		
123-125 (a.m.p.) wax		.0445
125-127 (a.m.p.) wax		.0455
128-130 (a.m.p.) wax		.0480
130-132 (a.m.p.) wax		.0505
133-135 (a.m.p.) wax		.0535
135-137 (a.m.p.) wax		.0560
124-126 (a.m.p.) w.s.	.0240	.0250
124-126 (am.p.) y.s.	.0240	.0245
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅞	.03
Extra amber	.03	.03¼
Lily white	.06⅝	.06⅞
Snow white	.07⅝	.07⅞
Cream	.05⅝	.05⅞
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅞	.03
Extra amber	.03	.03⅛
Lily white	.06⅝	.06⅞
Snow white	.07⅜	.07⅞
Cream	.05⅝	.05⅞

Export Prices

GASOLINE

GULF COAST—

U. S. Motor		.05¼
60-62 400		.05⅝
61-63 390	.05⅝	.05½
64-66 375		.05½

LOS ANGELES—

U. S. Motor grades:		
53-55 octane		.04⅝
55-65 octane	.04⅝	.05
65-67 octane		.05
67-69 octane		.05¼
Above 69 octane		.05½
65 and above 400 e.p.	.05½	.06

KEROSENE

GULF COAST—

41-43 prime white		.03
41-43 water white		.03⅛
44 water white		.03⅝

LOS ANGELES—

41-43 water white	.04½	.05

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.o.s. in bbls.)—

Cylinder Stocks:		
600 Warren E		.21½
600 S.R. unfiltered	.19½	.20
550 S.R. unfiltered	.20¼	.20⅜
600 flash S.R.	.21	.21¼
630 flash S.R.	.24	.24½
Bright Stocks:		
8 color		.28
6½ plus color in dilution		.27

NEUTRAL OIL

200-3 color	.27
150-3 color	.23½

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 a.m.p.		.04125
125-127 a.m.p.		.0425
128-130 a.m.p.		.0450
133-135 a.m.p.		.0525
135-137 a.m.p.		.0550
Crude scale:		
124-126 w.s.	.0260	.0270
124-126 y.s.	.0240	.0245

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 9, 1936)

East Texas*	$1.15
Van, Tex.†	1.02
Altus and Tipton, Okla.‡	1.08
Other fields (see gravity table).	

*All companies. †Pure Oil Co. ‡Gypsy Oil Co.

West Texas

Crane, Upton, Howard, Glasscock and Mitchell Counties	$ .80
Winkler County	.85
Lea County, N. Mex.	.85
Pecos County*	.85
Pecos shallow†	.75

*Shell Petroleum Co., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Petroleum Corp.

Note—For Humble, Magnolia and Texas Co.'s West Texas and Lea County prices see gravity table. Above prices are those of other buyers.

Rocky Mountain States

(Effective January 9, 1936)

Iles, Colo., light*	$1.06
Iles, Colo., heavy*	1.00
Greybull, Wyo.*	1.28
Torchlight, Wyo.*	1.28
Grass Creek, Wyo., light*†	1.18
Grass Creek, Wyo., heavy*†	.72
Hamilton Dome, Wyo.*	.67
Elk Basin, Wyo., light*†	1.18
Frannie, Wyo., heavy*	.72
Frannie, Wyo., light (Feb. 24, 1936)*	.78
Hogback, N. Mex.*	1.21
Pondera, Mont. (Jan. 29, 1936)*.	1.05
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1.11
Rock Creek, Wyo.†	1.12
Artesia, N. Mex. (Dec. 1, 1923)‡	.75
Maljamar, N. Mex. (Sept. 29, 1933)‡	.75
Fort Collins and Wellington, Colo. (Jan. 9, 1936)‡	See Note
Florence, Colo.	.98
Lance Creek, Wyo.	.85
Lost Soldier, Wyo. (Sept. 30, 1933)..	.88
Hudson, Wyo. (June 2, 1931)	.65
Sunburst, Mont. (June 5, 1936)	1.15
Cat Creek, Mont.	1.28
Cut Bank, Mont.	1.35

*Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co.

Note—Fort Collins and Wellington are not posted, price 5 cents under quotation of Salt Creek crude of like gravity (Fort Collins 36°; Wellington 33°). *Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co. Cut Bank by Toronto Pipe Line Co.

Southwest Texas

(January 9, 1936)

Saxet	$ .90
Mirando	.85
Pettus	1.25
Salt Flat*	.97
Salt Flat‡	.97
Darst Creek*	.97
Darst Creek†	.97
Luling	.90
Lytton Springs	1.00
Duval County	.85

*Humble Oil & Refining Co. †Magnolia Petroleum Co., Gulf Pipe Line Co. and Texas Co. ‡Shell Petroleum Corp. Saxet posted by Humble and Texas; Mirando by Humble and Magnolia; Pettus by Humble; Salt Flat by Humble; Luling and Lytton Springs by Magnolia; Duval by Texas Co.

Middle Western States

OHIO OIL CO.

Lima (Jan. 10, 1936)	$1.25
Illinois (Jan. 9, 1936)	1.23
Princeton, Ind. (Jan. 9, 1936)	1.23
Midland, Mich. (June 15, 1936)*	1.42
Midland, Mich. (June 15, 1936)†	1.42
West Branch, Mich. (June 15, 1936)	1.26
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River (Jan. 9, 1936)	1.30
Kentucky River (Jan. 9, 1936)	1.38
Western Kentucky (Jan. 9, 1936)	1.22

*Posted by Pure Oil Co. and includes Greendale, Porter, Beaverton and Crystal crudes. West Branch, Mich., by Simrall Corp. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co. †Simrall Corp.

Gulf Coast

(January 9, 1936)

Cleveland, Tex.	$1.10
Hardin, Tex.	1.03
Greta, Tex.	.90
Refugio, Tex., heavy	.90
Tomball, Tex.	1.30
LaFitte, La.	1.12
Livingston, Tex.	1.15
Bosco, La. (Jan. 16, 1936)	1.05
Evangeline, La.	1.07
Welsh, La.	.96

Cleveland and Hardin by Magnolia; Greta by Texas Co.; Refugio by Humble; Tomball by Humble and Magnolia; LaFitte by Texas Co.; Bosco by Pure; Evangeline and Welsh by Stanolind Oil & Gas Co.; Livingston by Shell Petroleum Corp.

North Louisiana and Arkansas

Smackover, all grades (Jan. 10, 1936)*	$.75
Smackover, all grades (Jan. 9, 1936)†	.80
Tullos and Urania (Jan. 10, 1936)	.97
Nevada, Ark. (Jan. 10, 1936)	.65
El Dorado East Field (Jan. 16, 1936)	.75
Converse, Holly, Pleasant Hill and Zwolle (Jan. 10, 1936)*	1.10
Lisbon, Ark. (Jan. 10, 1936)*	1.10
Elm Grove, La. (Jan. 10, 1936)	.80

*Standard Oil Co. of Louisiana, Gulf Refining Co., Louisiana Oil Refining Co., Texas Co. (effective January 14) and Magnolia Petroleum Co. (effective January 16). Urania by H. L. Hunt Co. and Louisiana Oil Refining Co. Nevada by Standard of Louisiana, El Dorado East field by Magnolia Petroleum Co. Phillips Petroleum Co. (effective January 17), posts 75 cents for all grades in Union and Ouachita Counties, Arkansas.

Eastern States

TIDE WATER PIPE CO.
(Effective Jan. 13, 1936)

Bradford, Pa.	$2.46
Allegany, N. Y.	2.46

SOUTH PENN OIL CO.
(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2.46
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.17
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.12
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.97
Corning Grade Oil in Buckeye Pipe Line Co.'s lines	1.42

PENNZOIL CO.
(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines:	
Group A	2.42
Includes Cochran, Franklin, Hamilton and Doolittle districts.	
Group B	2.41
Includes Titusville district.	
Group C	2.40
Includes Turkey and Tidioute districts.	
Group D	2.39
Includes Bear Creek and Porkey districts.	
Group E	2.36
Includes Edeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts.	

Price depends on lengths of pipe line haul to plant at Oil City.

PURE OIL CO.
(Effective Jan. 13, 1936)

Cabin Creek, W. Va.	$2.12
Bradford Hollow, W. Va.	2.12
Kelly Creek, W. Va.	2.12

Canada

Ontario (Sept. 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (Feb. 3, 1936):†	
Clean naphtha	2.70
Discolored naphtha	2.46
Crude oil, 50 gravity	2.32
Crude oil, 45 to 49.9	2.12
Crude oil, 40 to 44.9	1.58

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Mexico

Panuco*	$ .74

*F.o.b. ship, based on April transactions and exclusive of production and export taxes and bar dues.

Walter G. Ricketts, general superintendent, Amerada Petroleum Corp., Tulsa, is taking the baths at Hot Springs, Ark., and expects to be away from his office another week.

Crude Prices by Gravities

Gravity—	Oklahoma, Kansas, and Salt Creek, Wyo.	Central and North Texas	East Central Texas	North Louisiana, Arkansas	Gray County, Texas	Carson and Hutchinson Counties, Texas	Conroe, Texas	West Texas and Lea County, New Mexico	Gulf Coast, Texas and Louisiana	Anahuac and Dickinson, Texas	Iowa and Cameron Meadows, Texas
Below 20	....	....	....	....	....	....	....	....	$.92	....	$.82
20-20.9	....	....	....	....	....	....	....	....	.94	....	.84
21-21.9	....	....	....	....	....	....	....	....	.96	....	.86
22-22.9	....	....	....	....	....	....	....	....	.98	....	.88
23-23.9	....	....	....	....	....	....	....	....	1.00	....	.90
24-24.9	....	....	....	....	....	....	....	....	1.02	....	.92
Below 25	$.86	....	....	$.78	....	....	....	....	....	....	....
25-25.9	.88	....	....	.80	....	....	....	....	1.04	....	.94
26-26.9	.90	....	....	.82	....	....	....	....	1.06	....	.96
27-27.9	.92	....	....	.84	....	....	....	....	1.08	....	.98
28-28.9	.94	....	....	.86	....	....	....	....	1.10	....	1.00
Below 29	.94	$.84	$.91	....	....	....	....	$75	....	....	....
29-29.9	.96	.86	.93	.88	....	....	....	.76	1.12	....	1.02
30-30.9	.98	.88	.95	.90	....	....	....	.78	1.14	$1.04	1.04
31-31.9	1.00	.90	.97	.92	....	....	....	.80	1.16	1.06	1.06
32-32.9	1.02	.92	.99	.94	....	....	....	.82	1.18	1.08	1.08
33-33.9	1.04	.94	1.01	.96	....	....	....	.84	1.20	1.10	1.10
34-34.9	1.06	.96	1.03	.98	....	....	....	.86	1.22	1.12	1.12
Below 35	....	....	....	....	$.86	$.81	....	....	....	....	....
35-35.9	1.08	.98	1.05	1.00	.88	.83	$1.24	.88	1.22	1.14	1.14
36-36.9	1.10	1.00	1.07	1.02	.90	.85	1.26	.90	1.22	1.16	1.12
37-37.9	1.12	1.02	1.09	1.04	.92	.87	1.28	.90	1.22	1.18	1.12
38-38.9	1.14	1.04	1.11	1.06	.94	.89	1.30	.90	1.22	1.20	1.12
39-39.9	1.16	1.06	1.13	1.08	.96	.91	1.32	.90	1.22	1.22	1.12
40 and over	1.18	1.08	1.15	1.10	.98	.93	1.34	.90	1.22	1.24	1.12

Magnolia Petroleum Co. in the East Central Texas field pays 7 cents per barrel less than above posted prices in that field.

STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO.

Crude oil prices at the well effective June 22, 1936

Gravity—	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier E.Coyote (La Habra)	Montebello	W. Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills Buena Vista Hills Midway-Sunset	Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills	Santa Paula*	Orcutt*
14-14.9	$.80	$.79	$.74	$.78	$.79	$.80	$.76	....	....	....	$.80	$.76	$.76	$.77	$.78	....	....	$.70	$.65	$.70	$.70	....	....	$.70	....
15-15.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.65	.70	.70	....	....	.70	....
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.65	.70	.70	....	....	.70	.70
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.65	.70	.70	....	....	.71	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	....	....	....	.82	.76	.76	.77	.78	....	....	.70	.65	.70	.70	....	....	.72	.72
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	....	.85	.76	.78	.77	.78	....	$.70	.74	.66	.74	.71	$.70	....	.75	.74
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	....	.88	.78	.82	.77	.80	....	.70	.78	.68	.78	.72	.70	....	.77	.77
21-21.9	.88	.79	.74	.89	.93	.93	.88	....	....	....	.91	.80	.85	.77	.84	$.78	.73	.82	.71	.82	.74	.70	....	.79	.80
22-22.9	.92	.82	.74	.92	.96	.98	.92	....	....	....	.93	.84	.89	.79	.88	.78	.77	.87	.74	.86	.78	.72	....	.82	.83
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$.84	$.79	....	.96	.88	.93	.82	.92	.78	.80	.92	.77	.90	.82	.76	....	.85	.86
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	....	.99	.91	.96	.85	.96	.82	.84	.97	.80	.94	.86	.79	....	.87	.88
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	'3	....	1.02	.95	....	.89	.99	.86	.88	1.01	.83	.98	.90	.83	....	.90	.91
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.8	....	1.05	.98	....	.92	1.03	.90	.91	1.06	.86	1.02	....	....	....	.92	.93
27-27.9	1.10	1.05	.88	1.11	1.12	....	1.10	1.02	.88	....	....	1.02	....	.96	1.06	.95	.95	1.10	.88	1.06	....	....	....	.95	....
28-28.9	1.14	1.10	.90	1.14	1.15	....	1.14	1.07	.90	....	....	1.06	....	.99	1.10	.93	.99	1.15	.91	1.10	....	....	....	.97	..
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	....	....	1.09	....	1.03	1.14	1.03	1.02	1.20	.94	1.14	....	....	....	.99	....
30-30.9	1.21	1.19	.95	1.22	1.21	our	1.21	1.17	.95	F.O.B.	....	....	....	1.07	1.17	1.08	1.06	1.25	.97	1.18	....	....	....	1.01	....
31-31.9	....	....	....	....	1.24	Pipe	1.24	1.22	.97	Ship	....	....	....	1.11	1.21	1.12	1.09	1.29	.99	....	....	....	....	....	....
32-32.9	....	....	....	....	1.27	Line	1.27	1.27	1.00	....	....	....	....	1.14	1.25	1.16	1.13	1.34	1.02	....	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	1.32	....	$1.28	....	....	....	1.18	1.28	1.20	1.17	1.38	1.04	....	....	....	$1.19	....	....
34-34.9	....	....	....	....	....	....	....	1.37	....	1.32	....	....	....	1.22	1.32	1.25	1.20	....	....	....	....	....	1.23	....	....
35-35.9	....	....	....	....	....	....	....	1.42	....	1.35	....	....	....	1.25	....	1.29	....	....	....	....	....	....	1.27	....	....
36-36.9	....	....	....	....	....	....	....	1.46	....	1.39	....	....	....	1.29	....	1.33	....	....	....	....	....	....	1.31	....	....
37-37.9	....	....	....	....	....	....	....	1.51	....	1.43	....	....	....	1.32	....	1.37	....	....	....	....	....	....	1.35	....	....
38-38.9	....	....	....	....	....	....	....	1.56	....	....	....	....	....	1.36	....	1.42	....	....	....	....	....	....	1.39	....	....
39-39.9	....	....	....	....	....	....	....	1.61	....	....	....	....	....	1.40	....	....	....	....	....	....	....	....	1.43	....	....
40-40.9	....	....	....	....	....	....	....	1.66	....	....	....	....	....	1.43	....	....	....	....	....	....	....	....	....	....	....

Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. Santa Paula and Orcutt posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.14 for 28 degrees and over, and Belridge and Lost Hills schedule stops at $1.32 for 37 degrees and over.

MARKET RECORD, ACTIVE OIL STOCKS

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1936 High	1936 Low	Week ended Aug. 15 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
125½	75	1,000	101½	100	100	Amerada Corp.	788,675	N.P.	50cQ	7-31-36	$2.00	80	48½	55⅝	39
35⅛	26⅝	10,700	28⅝	27½	28	Atlantic Refining	2,664,904	$25	25cQ	9-15-36	1.00	28	20½	35¼	21½
20	14⅛	6,900	17⅜	16⅝	16⅝	Barnsdall Corp.	2,131,090	$5	20cQ	8-1-36	‡.20	14¾	5⅞	10	5⅞
23⅜	14	47,400	23⅛	21⅛	21⅜	Columbia Gas & Elec.	11,610,036	N.P.	20c	5-15-36	.20	15¾	3⅜	19¼	6⅝
15¼	11½	84,900	12⅝	11⅞	12½	Consolidated Oil Corp.	13,983,287	N.P.	15cQ	8-15-36	.25	12¼	6½	14¼	7¼
38½	28⅛	13,600	32⅜	31	31	Continental Oil of Delaware	4,682,671	$5	25c	7-31-36	.62½	35	15⅛	22¾	15⅜
34¾	21	2,900	25¼	23⅝	23¾	General Asphalt	387,149	$10	25c	12-17-35	.25	22½	11¾	23½	12
12¼	6⅜	8,900	9⅝	9	9⅛	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	7	1½	5⅝	2½
23¾	17¼	5,400	23	22⅜	22⅝	Mid-Continent Petroleum	1,843,872	$10	40cSA	6-1-36	.40	20½	9½	14¾	9⅛
26¼	16¾	2,600	21¼	20	20⅝	Mission Corporation	1,399,345	N.P.	....	.....	....	17¾	10⅜	..	..
69½	19⅞	7,100	69½	63½	64⅞	National Supply of Delaware	382,591	$25	....	5-15-31	....	20⅞	9	21⅛	10
17½	12⅜	33,200	13⅛	12⅜	12½	Ohio Oil Co.	6,563,377	N.P.	25cSA	6-15-36	.30	14¼	9¼	15⅞	8½
18	11¾	3,700	15¼	14¼	14⅜	Pacific Western Oil	1,000,000	N.P.	40c	11-30-34	.25	14	6⅜	9⅜	5½
4¼	1⅜	300	2½	2¼	2¼	Panhandle P. & R.	198,770	N.P.	....	.....	....	1⅞	½	2½	⅝
49⅜	38⅛	25,300	44	41½	42⅝	Phillips Petroleum	4,152,836	N.P.	50cQ¶	9-1-36	1.25	40	13¾	20¾	13⅜
16½	11⅞	6,900	16	15½	15⅝	Plymouth Oil Co.	1,050,000	$5	25c	9-30-36	.25	13	6½	16¾	7¼
24⅞	16¼	49,000	19	17⅞	18	Pure Oil Co.	3,038,370	N.P.	....	9-1-30	....	17	5⅞	14⅞	6⅛
43⅝	30⅜	1,700	34½	33	33¾	Seaboard Oil of Delaware	1,244,283	N.P.	25cQ	9-15-36	1.00	36⅞	20¾	38⅜	20¾
19⅞	14¾	10,600	19⅛	18½	18⅝	Shell Union Oil	13,070,625	N.P.	....	6-30-30	....	16½	5½	11½	6
124	110½	1,500	123¾	122	122	Shell Union Oil pfd.	400,000	$100	1.37½	7-1-36	....	111	63⅛	89	57
6¾	3½	2,600	4¼	4⅛	4¼	Simms Petroleum	461,698	$10	1.25 liq.	7-20-36	11.75 liq.	18¾	4¾	17⅛	7¼
31½	19½	2,500	29⅜	27	27	Skelly Oil	1,008,514	$15	....	12-15-30	....	20½	6½	11½	6
17	12½	50,100	14¾	14⅛	14⅜	Socony-Vacuum	31,151,075	$15	25cSA	9-15-36	.30	15¾	10⅝	19⅞	12½
47⅝	35⅝	16,000	38	36½	36⅝	Standard Oil of California	13,014,754	N.P.	30cQ¶	9-15-36	1.00	41⅛	27¾	42⅞	26½
40⅛	32¾	8,800	37½	36½	36⅞	Standard Oil (Indiana)	15,215,677	$25	25cQ†	9-15-36	1.00	33⅜	23	32¾	23¼
30	25	No Sales				Standard Oil of Kansas	200,000	$10	....	10-31-34	....	32	20	41	26
70	51⅛	42,900	64¾	61¾	63⅜	Standard Oil of New Jersey	25,856,081	$25	75cSA¶	6-15-36	‖1.25	52⅜	35¾	50⅛	39⅛
91	72	400	82	80⅞	82	Sun Oil	1,733,013	N.P.	25cQ	9-15-36	$1 & 7% Stk.	77	60½	74¼	51½
40	28⅞	20,800	39¾	38½	38½	Texas Corp.	9,340,069	$25	25cQ†	10-1-36	1.00	30¼	16½	29⅜	19⅝
15¼	7½	6,400	11⅝	11	11⅛	Texas Pacific Coal & Oil	880,703	$10	25c	8-1-36	....	9¼	3¼	6½	2½
19⅛	14¾	11,200	17¾	17	17	Tide Water Associated	5,642,342	N.P.	15cQ	9-1-36	....	15⅞	7⅝	14⅜	8
106½	100⅝	1,000	105	104¾	104¾	Tide Water Associated pfd.	626,221	$100	$1.50Q	7-1-36	$6.50	104½	84	87	64½
28½	20⅞	2,700	22⅝	21⅞	22	Union Oil of California	4,386,070	$25	25cQ	8-10-36	1.00	24	14¾	20½	11½
31⅝	22⅝	300	27¼	26¼	26¼	Union Tank Car Co.	1,200,000	N.P.	30cQ	9-1-36	1.20	26½	20⅞	25¾	15⅝
5¼	2¾	1,100	3⅝	3⅝	3⅝	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	3½	1	5¾	2

*Ex-dividend. †Plus extras. ‡Also 50 per cent in stock of Barnsdall Ref. §Partly on account of accumulation. ‖Dividend 4/75 Mission Corp. paid 3-15-35. ¶Includes extras.

New York Curb

1936 High	1936 Low	Week ended Aug. 15 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
21	13¼	6,000	21	18½	19	Bridgeport Machine Co.	150,000	N.P.	....	5-1-30	....	14⅛	3¾	3¾	½
50	39¾	150	44¾	44⅝	44⅝	Buckeye Pipe Line Co.	200,000	$50	75cQ	9-15-36	$3.00	42½	30½	38	26
4⅞	1⅞	5,300	2½	2⅛	2¼	Carib Syndicate	799,020	25c	....	.....	....	4¼	1⅝	5½	1½
124¾	105	400	120½	119	120	Chesebrough Mfg. Co.	120,000	$25	$1.50Q	6-29-36	6.50	157	115	150	116
7⅜	3	55,900	4¾	4¼	4⅜	Cities Service	37,804,394	N.P.	....	6-1-32	....	3¼	⅜	4¼	1¼
4	⅝	700	1⅜	1	1	Colon Oil	2,200,000	N.P.	....	.....	....	2⅛	½	3¼	½
4⅛	4½	16,100	3⅜	3	3¼	Cosden Oil	399,687	$1	....	.....	....	1½	¼	3⅞	½
34¾	19⅞	8,500	23½	21⅛	21⅛	Creole Petroleum	6,974,356	$5	25c	7-15-36	.20	23¾	10	14⅜	9⅝
12	9	800	11½	10⅞	11	Darby Petroleum	351,390	$5	25cSA	7-15-36	.50	8⅞	4	7½	4⅛
4⅝	1⅞	1,600	4⅜	4	4⅛	Derby Oil & Refining	263,162	N.P.	....	.....	....	2	⅝	2¼	1
44	39	No sales ..		..	..	Eureka Pipe Line	50,000	$50	$1Q	8-1-36	4.00	38	33¼	37	30
98	72	2,600	90	87¼	87¼	Gulf Oil Corp.	4,538,101	$25	25c	7-1-36	....	74¾	50¼	76¾	49⅝
76½	57	6,100	67⅞	66⅛	67	Humble Oil & Refining (new)	8,923,935	N.P.	25cQ	7-1-36	1.25	64	44	49½	33¼
24½	20	6,100	21	20¾	20¾	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	6-1-36	1.25	22½	15⅜	17⅞	12⅝
9¼	5½	400	7½	7¼	7½	Indiana Pipe Line	300,000	$10	20cSA	5-15-36	.35	6½	3⅝	6⅞	3⅝
39⅝	32⅞	4,800	35½	34½	34½	International Petroleum	14,247,088	N.P.	$1.25†‡	6-1-36	2.50	39⅜	28	33⅜	19⅜
15⅜	9⅞	12,800	12	11⅛	12	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	6-15-36	.10	11⅜	4⅜	5	2⅛
15	7⅜	800	14⅜	13⅝	13⅝	Lion Oil Refining	270,000	N.P.	....	10-27-30	....	8⅛	3½	6	3⅜
14⅜	9⅞	6,900	14⅜	13⅛	13⅛	Lone Star Gas	5,382,723	N.P.	20cSA	8-15-36	.30	10⅞	4½	8⅜	4¼
8⅜	5	1,700	5⅞	5¾	5¾	Mountain Producers	1,682,182	$10	30cSA	7-1-36	.90	5¾	4⅛	5½	4
23	17⅝	1,600	19¾	19¼	19⅝	National Fuel Gas	3,810,183	N.P.	25cQ	7-15-36	1.25	20	11¾	18½	13⅛
15¾	9¼	2,100	10¾	10¼	10¼	National Transit	509,000	$12.50	40cSA	6-15-36	.75	10⅝	6¾	9½	7
4½	2⅞	1,300	3	3	3	New Bradford Oil	1,445,202	$5	10cSA	5-15-36	.20	3¼	2	2½	1¾
6⅝	1⅝	200	3	3	3	New Mexico and Arizona	1,000,000	$1	....	.....	....	2½	1	2¾	1
6¼	4½	300	5½	5¼	5½	New York Transit	100,000	$5	15cSA	4-15-36	.30	4⅞	3	4¾	3
9¼	4⅞	800	7½	7⅜	7⅜	Northern Pipe Line	120,000	$10	15cSA	7-1-36	.50	8	5¼	7	4⅝
6⅝	3¼	18,500	5⅛	4½	4⅝	Pantapec Oil	1,608,700	N.P.	....	.....	....	4⅜	1¼	2⅝	⅞
19¼	4½	8,300	16¼	15⅛	15⅞	Root Petroleum Co.	336,045	$1	25c	8-1-36	....	5	1½	..	..
4¾	1⅞	300	3¼	3	3¼	Ryan Consolidated	296,931	N.P.	....	.....	....	2½	⅝	3⅜	⅞
10	7	500	7⅜	7⅛	7⅛	Salt Creek Producers	1,496,859	$10	40cSA	6-30-36	1.20	7½	5½	7⅞	5½
40½	32½	1,200	39¼	39	39¼	South Penn Oil	1,200,000	$25	50c†	6-30-36	1.35	34½	21⅝	26½	17½
7⅞	3¼	500	4½	4⅜	4½	Southern Pipe Line	100,000	$10	15cSA	3-2-36	.30	5	3⅞	5½	3½
60	54	No sales ..		..	..	Southwest Penna. Pipe Lines	35,000	$50	$10 spl.	7-1-36	5.00	56	44¼	47	41
23¾	17⅛	2,800	19¾	19¼	19¼	Standard Oil of Kentucky	2,604,790	$10	25cQ	6-15-36	1.25	24	18	18¾	14⅝
14⅝	11	4,000	13¼	12¼	12¼	Standard Oil of Nebraska	188,403	$25	....	6-20-34	....	12	7¾	16⅞	8¼
36¼	21⅜	1,300	32¾	31½	32	Standard Oil of Ohio	753,740	$25	25c	7-15-36	....	23⅝	11½	28½	12¼
5	2⅝	22,000	4	3⅝	3⅞	Sunray Oil	1,610,810	$1	....	4-15-31	....	2⅞	⅞	2	⅟₁₆
9¾	5½	1,100	5⅞	5½	5⅝	Texon Oil & Land	336,028	N.P.	15cQ	6-30-36	.60	6⅞	5	11	4⅜
7½	4⅜	7,900	5¼	4⅝	4⅞	Texas Gulf Producing Co.	888,084	N.P.	....	12-29-34	....	4¾	2½	7	3⅜

*Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups

NEW OR IMPROVED EQUIPMENT

Operator Fatigue Reduced by New Speed-O-Matic Control

Link-Belt Co., Chicago, builder of power-operated shovels, draglines and cranes, has announced a power control, with short, easy-throw levers, to be known as Speed-o-matic control. The advantages

are enumerated as (1) elimination of operator fatigue, (2) faster operation and (3) greater output.

G. H. Olson, general manager of the company's shovel and crane division, compared operation of a Speed-o-matic shovel-dragline-crane to the drawing of water out of a faucet by simply turning a handle. Drawing water out of a faucet requires only an easy wrist motion, as does Speed-o-matic control. Elimination of fatigue not only performs a humanitarian function but also speeds up operations.

A small fraction of the power of the machine is harnessed for doing the work under the guidance of the operator, instead of requiring his doing manual labor in performing the necessary operations hundreds of times a day.

Bulletins, Booklets and Other Literature for the Trade

An "Operator's Instruction Book," covering Landis heat-treated die-heads, may be obtained by writing to the Landis Machine Co., Waynesboro, Pa.

A new series of bulletins has just been released by the Wheelco Instruments Co., 1112 Milwaukee Avenue, Chicago, on pyrometric heat control. In these bulletins, prepared by its technical engineers, the Wheelco company presents an analysis of its "radio principle" type of pyrometric control instruments.

Gates Vulco ropes play an important part in development of the Mansion area of Oklahoma City, according to an article in the August number of Industrial News, published by the Gates Rubber Co.

A revised edition of the "Handbook of Steam Flow Measurement," by L. K. Spink, has been published by the Foxboro Co., Foxboro, Mass. Since its original publication in 1931, this 70-page book has become a standard reference manual on steam flow.

Rock-cork pipe covering, a mineral insulation for low-temperature piping, is described in detail in a six-page brochure issued by Johns-Manville.

A 32-page bulletin describing design, construction and operation of pressure regulators, controllers, stop-valves, balanced relief valves, altitude valves, pump governors, and strainers is offered by Davis Regulator Co., 2543 South Washtenaw Avenue, Chicago.

The current number of the Reading Puddle Ball, published by the Reading Iron Co., Philadelphia, contains among its articles an interesting one on "Wrought Iron in Invention."

"Common Sense Ventilation for Industrial and Commercial Buildings" is the title of a bulletin obtainable from the Swartwout Co., 18511 Euclid Avenue, Cleveland, Ohio.

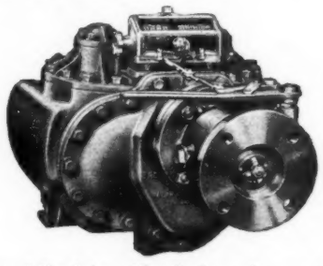
Bristol's model 6088V process cycle controller is described in bulletin No. 447, available on request from the Bristol Co., Waterbury, Conn.

Manhattan Granted Patent

Patents covering its radioactive treatment of fire hose have been granted the Manhattan Rubber Manufacturing Division of Raybestos-Manhattan, Inc., Passaic, N. J. The patent certificate is No. 2,045,738. This treatment is applied to the cotton fabric used in the making of fire hose. It involves processing with rare earth metal salts having radioactive properties which according to the manufacturer, effectively and permanently resist mildew and make the hose moisture-repellant and rot- and freeze-proof.

Line-Shock Eliminated in New Series of Brodie Quantrols

Announcement of a new series X-300 Quantrol has been made by the Ralph N. Brodie Co., 959 Sixty-first Street, Oakland, Calif. This unit has been developed for loading-rack and bulk-plant measurement of gasoline and fuel oil. It has a capacity of 300 gallons a minute.



One of the interesting features is an automatic slow-closing discharge arrangement. The X-300 Brodie Quantrol is preset to measure out any number of gallons. The outward flow is automatically controlled. A few gallons before the Quantrol makes a complete shutoff the flow is reduced to less than half. A complete shutoff is made instantaneously with the passage of the final predetermined gallon.

BETTIS MANAGEMENT TAKEN OVER BY E. S. WALNE

E. S. WALNE

ALLEN P. BERRY

Management of Bettis Sales Co., Houston, Tex., has been taken over by E. S. Walne, who recently resigned the position of assistant to the general fields superintendent of Mexican Eagle Oil Co. at Tampico, Mexico. Mr. Walne once served Humble Oil & Refining Co. in the drilling and producing divisions at West Columbia, and later was chief clerk and head warehouseman in that Gulf Coast district, a position he resigned to go to Mexico.

Bettis Sales Co. has appointed Allen P. Berry sales representative. Mr. Berry resigned from Sheldon Machinery Corp. after eight years of service in the Mid-Continent and Gulf Coast territory. He will continue to handle the Sheldon account in his new capacity. In 1913 he went with the J. F. Lucey Co. in Mexico and spent several years there and in the Dutch East Indies. He returned to Mexico after the World War as manager of Lucey Manufacturing Corp. of Mexico and later moved to New York to work export trade for Lucey Products Corp.

Harnischfeger P&H Pacemaker Offers Advanced Features

Broadening the line of P&H pacemakers, the Harnischfeger Corp. of Milwaukee, Wis., announces a high-speed, three-fourths yard machine designated as the model 355. Designed as an all-purpose machine, the 355 is built of the new high-tensile steels by electric welding, effecting a weight below that of its predecessor of similar capacity. The frame, for example, instead of unit cast-steel construction, is now welded of structural steel sections with a reinforced cylindrical carbody welded integrally with crawler frames. In addition to the

lightness, greater strength is also obtained in this structure through the uniform quality of rolled steels.

The P&H model 355 uses standard tractor crawlers of the type manufactured by the Allis-Chalmers Co. Mobility is one of the outstanding features of this new machine with greater speed and maneuverability. Resiliency in the track itself gives added protection to the tough rolled steel crawlers.

Smoother operation is claimed with helical gears in both reductions of the hoist mechanism, while a live roller circle with hook rollers eliminates any pull on the center pin, thus permitting free swing with the heaviest dipper loads.

Carson Enlarges Plant

Increase in business and a desire to step up efficiency in production have prompted enlargement of the Carson Machine & Supply Co. plant in Oklahoma City, Okla. This company, which operates branches in Fittstown, Perry and Seminole, Okla., and Lyons, Kans., has more than doubled their capacity for handling orders.

Here and There With Men Who Manufacture Equipment

H. C. Eddy, chief engineer of the Petroleum Rectifying Co. of California, has returned from an extended trip through the Gulf Coast, Mid-Continent and eastern states where he inspected Petreco Electromatic dehydrating plants installed during recent months. He conferred with refinery executives relative to problems resulting from salt in crude charging stocks.

The Fisher Governor Co., Marshalltown, Iowa, has appointed the General Meters & Controls Co., 205 West Wacker Drive, Chicago, its direct factory representative.

Thomas Cruthers has been appointed vice president of the Worthington Pump & Machinery Corp., with which he has been connected since 1907.

Ray Riddle is now associated with W. V. C. Jackson, Tulsa, in sales representation of the Falk Corp., Milwaukee, Wis., gear units and flexible couplings; Struthers-Wells Co., Warren, Pa., refinery vessels and heat-exchangers; Schubert-Christy Corp., Affton, Mo., cooling towers; Wheeling Machine Products Co., Wheeling, W. Va., pipe-fittings; Sivyer Steel Casting Co., Milwaukee, Wis., refinery fittings; Harnischfeger Corp., Milwaukee, Wis., excavators, cranes, hoists, motors, etc.; William F. Klemp Corp., Chicago, steel floor gratings.

E. T. Campbell, formerly of the associated lines division of the B. F. Goodrich Co., has been named assistant manager of the company's petroleum sales department, with headquarters in Akron, Ohio.

Jensen-Byrd Co., Spokane, Wash., has been appointed distributor of Enduro stainless steel, according to N. J. Clarke, vice president in charge of sales of the Republic Steel Corp., Cleveland, Ohio.

Sperry-Sun Opens New Branch

The Sperry-Sun Well Surveying Co., 1608 Walnut Street, Philadelphia, Pa., has opened a new branch office in the Commercial Bank Building, Lafayette, La., carrying H-K and Syfo clinographs and supplies. The company's main district operating office in the Gulf Coast territory is at 3118 Blodgett Avenue, Houston, Tex.

Bridgeport Opening New Stores

Bridgeport Machine Co., Wichita, Kans., has recently opened branch stores at Rodessa, La., and Talco, Tex. These, with three others about to be opened, will enable the company better to serve the trade in Louisiana, West Texas and the Gulf Coast. Large all-steel and concrete buildings under construction at Corpus Christi, Odessa and Kirmet, Tex., will be completed and stocked within a short time. Bridgeport now has in operation more than 50 branch stores, sales offices, warehouses and material yards, giving it complete coverage from Kansas to the Gulf. The new stores will carry the company's complete line of equipment, including National Tube products, American wire lines, drilling mud products, rotary and cable machinery and tools of all kinds, as well as used and reconditioned equipment.

Offers Advantages of Reamer With Additional One of Jar

The Badger rotary jar reamer, announced by the United Sales Agency, Box 374, Oklahoma City, Okla., is said to retain the advantages of the conventional reamer, with the additional advantage of a jar. This tool offers to the rotary driller the safety feature known to the users of a standard rig as the jar.

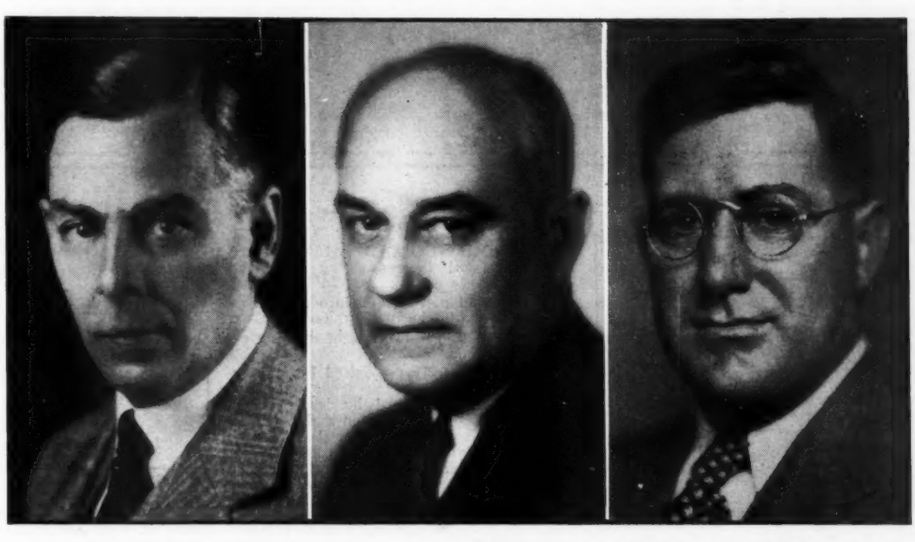
The accompanying illustration shows this jar reamer, which consists of an angular hollow stem, or mandrel, having rotary substitute connections at each end, with cutter-block having longitudinal angular openings conforming to the stem or mandrel and adapted for vertical reciprocation on the stem or mandrel. Rotary cutter-wheels are in the block. The tool is made with or without a helical spring enveloping the stem or mandrel and below the cutter-block. The vertical movement of the cutter-block on the hollow stem or mandrel (some 18 inches) is said to be sufficient to jar the cutter-block loose if it should become stuck in the bore of the well.

When used with the spring, an additional benefit is obtained by compressing the spring at the point of the obstruction, then engaging the drill-stem and by the spring compression drilling upward against the obstruction, using the cutter-wheels or teeth on top of the cutter-block as a bit.

Some drillers having shown disinclination to use this spring, a Badger rotary jar reamer is made without this feature. This piece of equipment is not a fishing or an occasional tool, but is regular equipment for all rotary rigs. The patent is owned and controlled by a group of Oklahoma City business men.

The Hinderliter Tool Co., Tulsa, has opened a new office in Rodessa, La.

CHANGES MADE IN A. O. SMITH EXECUTIVE POSITIONS



L. R. SMITH *W. C. HEATH* *J. M. FLOYD*

The board of directors of the A. O. Smith Corp. August 14 elected L. R. Smith, chairman of the board, W. C. Heath, president, and J. M. Floyd, vice president in charge of manufacture and engineering. The recent expansion of the corporation into new lines of activity has required an increase in the engineering and research staffs, and the changes in executive positions meet these demands.

Mr. Heath, formerly with Fairbanks-Morse & Co., became vice president in charge of manufacture and engineering and a director of the A. O. Smith Corp. in November, 1931. His election at this time to the presidency puts him in complete charge of the corporation's organization and its operations. Mr. Floyd, who assumes Mr. Heath's former position, has been connected with the Bendix Corp. of South Bend, Ind., for many years and is well acquainted with the type of work over which he will have supervision at the Smith plant.

The other officers are R. F. Bell, vice president; C. C. Joys, Jr., vice president and director of sales, and J. J. Stamm, secretary and treasurer.

Canadian Fields

(Continued from Page 122)

gary refinery. The tests now drilling are in areas where crude rather than naphtha may be expected.

West Side Operations

On the west side of the South Turner Valley structure, Foundation Petroleums No. 1, formerly Northwest Royalties No. 1, LSD 5, section 21-18-2w5, is below 4,300 feet after getting the cardium sandstone marker at 4,106 feet. The cardium was found 160 feet deeper than in Royalties No. 1, 1⅝ miles north. Sovereign Royalties No. 1, LSD 14, is below 3,950 feet after delay due to water shortage. West Side Royalties No. 1 Oliver-Hansen, LSD 3, is cleaning out and running 12⅝-inch casing preparatory to deepening from 2,460 feet. Newfold Royalties No. 1, LSD 11, is working on derrick and moving equipment. Rotary tools will be used.

In section 28-18-2w5, B. & B. Co. No. 1, LSD 12, offsetting Royalties No. 1 to the south, will start drilling as soon as Highwood-Sarcee No. 2 is completed. Renfrew Royalties No. 1, Morris & Goodfellow, LSD 3, is cleaning out to the top of the lime at 6,020 feet.

Model Oils Operations

In North Turner Valley, Model Oils No. 1, LSD 8, section 22-20-3w5, is testing after running tubing. The new method of production has increased the flow from 140 to 154 bbls. a day, in addition to saving gas.

Mercury Acquires Holdings

Mercury Oils, Ltd., of Calgary, headed by A. H. Mayland, has acquired the assets of Homestead Oils, Ltd., in the Turner Valley field, including acreage, and No. 1 in LSD 6, section 16-19-2w5, which has been producing from the lime at 4,792 feet about 3,000,000 feet of gas and a few barrels of absorption gasoline. The Homestead company will be put in liquidation and wound up; the payment being sufficient to take care of its liabilities. The gas production will be processed in the Gas & Oil Products, Ltd., absorption plant.

Aldersyde District

On the Aldersyde structure, east of Turner Valley, Ranchmen's Gas & Oil Co. No. 1, LSD 16, section 13-20-29w, is below 6,820 feet with a change in formation giving a little more gas and oil. Farther north, McLeod Oil Co. No. 1 New Valley, on the New Valley structure, LSD 4, section 6-21-2w5, is drilling open hole below 5,550 feet.

Tests in the Foothills

In the Forest Reserve area west of Olds, Hunter Valley Oil Co. No. 1 McLaren, LSD 12, section 13-31-10w5, is at 5,732 feet and has derrick up for rotary.

Eight miles northwest of Calgary, Monica Oil Co., Ltd., has located No. 1 test in LSD 2, section 32-25-2w5. Location was made by Geologist Russell V. Johnson. Julius Zaetschky of Calgary is president. The well will be a deep test of the Spy Hill structure. It is on the John Gray farm, where a water well in 1933 encountered oil showings.

On the Kootenay dome west of Calgary, Roxana Petroleum No. 1, section 8-24-7w5, is in a changed formation below 480 feet, after getting its first gas show at 380 feet. On the Moose dome, Moose Oils No. 2, LSD 8, section 29-22-6w5, is below 400 feet. It has been decided not to make a production test of Moose Oils No. 1, owing to bad condition of the hole.

On the Birch Ridge structure, Elbow Oils No. 1, LSD 11, section 35-22-5w5, is below 4,450 feet and below the Dalhousie conglomerates.

On the Highwood-Sinclair structure south of Turner Valley, Maple Leaf Royalties No. 1 Banner, LSD 6, section 34-17-3w5, is below 2,700 feet in a very hard formation with additional gas shows. On the Pekisko structure, Pekisko Hills Co. No. 1, LSD 6, section 6-17-2w5, is in very hard lime formation below 4,015 feet.

On the Watson structure, Mar Jon Oil Co. No. 3, LSD 3, section 4-10-2w5, is carrying casing below 4,840 feet.

Weymarn to Test Production

On the Mill Creek structure in the Pincher Creek area, Weymarn Petroleums No. 2, LSD 5, section 7-6-1w5, will core a few feet below present bottom at 5,665 feet and test production. It is in a horizon above the Madison, thought to be the Dalhousie sand, with strong shows of gas and light crude. It may later be deepened to test the Madison limestone. Unnamed interests have taken out a prospecting permit from the Alberta government covering 12,825 acres in Townships 5, 6 and 7, Ranges 1w5 and 2w5, in the area surrounding Weymarn No. 2.

Alberta Plains

In the border areas, Sunshine Oils No. 1, LSD 10, section 19-1-21w4, on the Del Bonita structure, is around 3,000 feet. On the north end of the Twin River structure, Del Bonita Associated Oils No. 3 Twin River, LSD 9, section 10-2-20w4, is resuming from 333 feet and is expected to get the Madison limestone early in October.

In the Cardston district, Franco Oils No. 1, LSD 6, section 5-3-25w4, is running casing.

In the Ribstone field, eastern Alberta, Dina Oil & Refining Co. No. 1, just west of Lloydminster, is carrying casing below 923 feet, after getting some gas around 700 feet.

Drilling in Ontario

In Chatham Township, Kent County, Ontario, Union Gas Co. No. 4, Lot 6, Concession 13, is below 1,750 feet, after getting a small gas show. In the Dover field, Kent County, Ajax Oil & Gas Co. No. 12, Johnston farm, got the Trenton limestone at 2,874 feet. In Romney Township, Kent County, Southern Ontario Gas Co. test on the Hall farm, Lot 20, Concession 4, is around 1,200 feet. In the Dawn field, Lambton County, Union Gas Co. No. 82, NE quarter Lot 24, Concession 1, is below 1,100 feet. Union No. 83, Lot 24, Concession 3, is below 850 feet. Petroleum Products Syndicate No. 2, Weese farm, Lot 22, Concession 3, finished with a natural flow of 150,000 feet a day and some oil. Petroleum Products No. 1 is starting to pump. In the Dover field, Kent County, Prairie Oil & Gas Co. No. 1 has been cleaned out and is being put on the pump.

On Turkey Point, Norfolk County, a number of summer cottagers formed a syndicate to drill a test for gas. No. 1 well got a production around 100,000 feet a day which will be used for the summer resort.

In the Eden field, Elgin County, Olga Gas, Ltd., has leased 90 acres due west of its No. 3 gasser on the Claude A. Wilson farm, Lot 24, Concession 8, Bayham Township, and will drill a series of three tests for gas this fall.

Mr. and Mrs. J. E. Farrell and family have just returned from a two weeks' sojourn in England and Europe, visiting with Mr. Farrell's relatives in Great Britain. Mr. Farrell is president of Farrell & Co. and Mrs. Farrell is vice president. He was discoverer of the Lathrop pool, part of the East Texas field.

Capt. T. S. Masterton, D.S.O., director of Phoenix Oil & Transport Company, and general manager in Rumania, attended the annual meeting of the company in London, England.

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Oil Man's Calendar

September

7-12—Washington, D. C., World Power fuel conference.

7-12—Pittsburgh, Pa., American Chemical Society, semiannual meeting.

8-10—Glacier National Park, Mont. Montana Bituminous Conference, second annual meeting, Many Glacier Hotel.

9-10—Louisville, Ky., Kentucky Petroleum Marketers Association.

16-17—Cincinnati, Ohio, Ohio Petroleum Marketers Association, fall conference and golf tournament, Netherland-Plaza Hotel.

16-18—Atlantic City, N. J., National Petroleum Association, 34th annual meeting, Hotel Traymore.

Week of 28—Indianapolis, Ind., National Tax Conference.

?—Tulsa or Oklahoma City, American Petroleum Institute, Division of Production, Mid-Continent district.

October

6-9—Richmond, Va., North American Gas Tax Conference.

12-13—Chicago, National Association of Lubricating Grease Manufacturers, Stevens Hotel.

21-22—Indianapolis, Ind., Indiana Independent Petroleum Association, fall convention, Hotel Severin.

November

9-12—Chicago, American Petroleum Institute, 17th annual meeting, Stevens Hotel.

November-December

30-Dec. 1—Oklahoma City, Okla., Independent Petroleum Association, Biltmore Hotel, annual meeting.